

# HOW TO PLAN PRINT



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## PREFACE BY THE AUTHOR

THIS book is written for students and others who wish to acquire facility and practice in the arrangement of type and other typographic printing surfaces into effective forms.

It will deal not only with the method of planning typography but indicate specific reasons, it will enunciate principles but explain the reasons underlying their enunciation. No theoretical dogmas will plead for acceptance which practice will not amply justify

Fortunately the compositor is still one who composes. Printing is just as much a composition as an architectural structure, a painting, or a piece of music. It cannot be wholly reduced to a formula. The rapid mechanisation of printing methods has opened up wider possibilities in design rather than reduced design in printing to formulas. There has, however, arisen a need for more careful planning because the methods of production have become intensified, and lost time or waste motion bears an increasingly high labour charge. With this change in method the principles of design need to be equated.

The purpose of this book is therefore in great part to define these principles so that they may be co-ordinated with the rapid march of development, to teach the designer (whether he designs in the office, studio, or shop) how his intention may be clearly shown to the technician who is responsible for its execution.

Art training to-day needs to be co-ordinated with workshop practice. The artist is apt to deplore the absence of good taste in the workman and technician, and the technician, in turn, is irritated by the artist's ignorance of the technical processes for which he is designing. The artist is too ready to design with but a vague idea of technical limitations and possibilities. The workman, in acquiring technical training, gets little chance of cultivating good taste or artistic judge-

ment. What is needed is art training based on a knowledge of workshop practice, shop-trained artists, not studio-trained craftsmen. Art training can only define principles, stimulate imagination, teach appreciation and expression of abstract lines and forms. A basis of technical experience for practical and constructive work is needed. The counterpart of the skilled technician in the school of art and industrial design is the student of art and design working in the factory—if necessary on a voluntary basis—so that he may acquire the necessary knowledge of the processes for which he intends to design.

It is regrettable that, in the printing industry, no opportunity is afforded for the student-designer to acquire technical knowledge on such a basis, and he is forced to “pick up” his knowledge through the kind offices of a friendly printer. Valuable as such superficial knowledge is, it is hardly sufficient to familiarise the student with the vast technical information which he must have at his finger-tips if he is to design efficiently.

This book is an endeavour to fill the needs of these two groups of printing students and practitioners of book and advertising typography, to supply the bases for the assimilation of the principles and the practice underlying both angles of the approach to the “craft of rightly disposing printing material in accordance with specific purpose.”

Printing is the chief means by which messages are multiplied and disseminated. There is no point in multiplying a message if it is not easily and instantly understood. It is useless to say a thing three times with a mouth full of marbles or to shout in a language that your listener does not understand. The cultured accents of a pleasantly readable type face effect their object where the asthmatic raucousness of a type face with meaningless frills or obesities fails.

Now the ready understanding of thought to be conveyed graphically depends on the means by which it is delivered, the type, the pictures, and the manner in which they are arranged are all important.

These essential considerations cannot be decided without

careful thought. For this task it is necessary to acquire some familiarity with type forms which express the words, appreciation of apt illustration, and the ability to arrange these elements into a comprehensive and logical design which will express the thought so that it will lose nothing of its effect and informative content.

Every printed item has a job to do. Its purpose should be the first thing to consider. Green ink on green paper, for use under artificial light, rattling paper at a classical concert, cumbersome menu cards that fall into the soup, text addressed to those with poor vision set in an 8-point type—such are examples of obvious failures on the part of printers, examples where the printer was not thinking of the purpose of the work. These pitfalls, these waste-paper-basket fillers, can only be avoided by visualising the intention of the finished work before deciding the first detail of its format.

The beginner's aim should be to work out the form which not only most fittingly expresses the copy matter but which also demands the least possible strain on the consumer's (reader's) attention.

There must always be concentration and simplicity of effect, the simpler the design the better. Simplicity does not here mean the absence of invention or originality, but the ruthless exclusion of all detail which does not assist the expression of the thought.

The print-planner must be courageous enough to express thought in new ways without following a rigidly set standard of style. Originality predicates a certain degree of independence, but is valuable only when the designer works with conviction. An echo of the work of another will generally lack not only conviction but sincerity.

The field of printing to-day may be divided into three main fields: bookwork, newspaper and periodical printing, and jobbing or display work. The character and aims of a book house differ considerably from those of a newspaper office, not only in the composing department but in the allied departments. The qualities required from those who design or compose matter for these offices are also widely different.

There is a greater demand for ingenuity (or at least for a different kind of ingenuity) in the preparation of display work than in bookwork, and the latitude for original design is wider.

The conclusions arrived at in this book must always be considered to apply within their own frame of reference. Emphasis which is of permanent selling value in a press advertisement might be an impertinence in a title page.

The typographer will create effective work by keeping the purpose of his work clearly in view. Conditions of printing and reading, permanence or otherwise of the finished work, will all affect its planning. Such apparently similar jobs as a newspaper advertisement and a periodical advertisement are widely different in purpose and nature. Nevertheless with a clear conception of the opportunities afforded him and a frank acknowledgement of the limitations imposed upon him, there will be little chance of radical error.



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## TYPOGRAPHICAL PRINTING SURFACES

A TYPE has three dimensions. Its height is called *height-to-paper*, and this dimension (918 in) remains constant for every type, whatever its size or design. The depth of a type is its *body*, which is referred to as being a certain number of points in size. The width of a type is called its *set*, and is normally the width of the letter or character and the amount of metal around it (called the *fitting*) on which the letter stands.

Types are made of an alloy of lead, tin, and antimony, and occasionally copper. Larger types (with a printing surface of an inch or more in height) are generally made of hard wood. Type metal is dense, ductile, and fusible at a fairly low temperature. It casts well, and is little affected by heat, water, oil, and alkalis.

Certain other terms are used to describe parts of a type. The *face* is the part that prints. The *feet* on which the type stands are formed by a channel called the *groove* (which is made when the type is finished by the typefounder). *Beard* is the slope between the outer edge of the face and the *shoulder* (which is the flat top of the type which upholds the face). The *nick* serves as a guide to the typesetter for the position of the type in the composing stick, and also to identify it from other types which do not belong to the same collection as far as size and design are concerned. Fig. 1 shows the names given to the various parts of the face of a type.

A *fount* of type is an assortment of any one style and size, and includes capital letters, lowercase (small letters), figures, fractions, reference marks (such as asterisks and daggers), diphthongs (æ, œ), and ligatures (fi, ff, fl, ffi, ffi)

The size of a type is expressed in multiples of a unit called a *point*. The point is *about*  $\frac{1}{72}$  of an inch, the pica being equal to twelve of these points. The exact measurement of a pica (or 12-point em) is .1660 in. The pica is the standard unit used for all measures or widths of lines

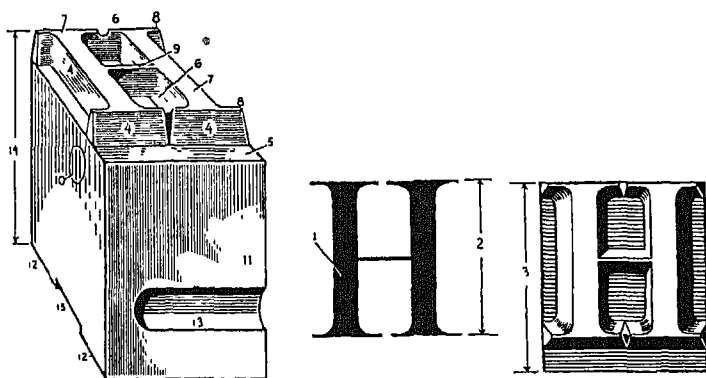


FIG 1—PARTS OF A TYPE (1) Face, (2) Height of Face (or Gauge), (3) Body or Size, (4) Bevel or Beard, (5) Shoulder, (6) Counter, (7) Stem or Thick Stroke, (8) Serif, (9) Hairline or Thin Stroke, (10) Pin Mark, (11) Body or Shank, (12) Feet, (13) Nick, (14) Height-to-Paper, (15) Groove

Type is made in various standard sizes from 5-point to 72-point. Above this size it is usually made of boxwood. Sizes in common use are 5, 6, 7, 8, 9, 10, 11, 12, 14, 18, 24, 30, 36, 42, 48, 60, and 72-point. Other sizes occasionally cast are 13, 16, 20, and 54-point.

#### THE WORD FORM

The form of a word may be represented in type in five different ways in **CAPITALS**, in **SMALL CAPITALS**, in lowercase, in *ITALIC CAPITALS*, and *italic lowercase*

Although capital letters give an agreeable and even effect, and are often used for inscriptions and title-pages, lowercase forms are the forms to which the eye is more accustomed. Lowercase letters are not necessarily more aesthetically pleasing, but capitals are wearisome to read at any length.

Words are made up of letters, and a letter is an arbitrary representation of a sound (*o*) or sounds (*x*) A letter cannot represent differences of intonation, pitch or stress, or variation in pronunciation The connection between the sound and the form of letters is therefore a convention. The early

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ&

ABCDEFGHIJKLMNOPQRSTUVWXYZ4&

abcdefghijklmnopqrstuvwxyzæœffffffffff

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ&

abcdefghijklmnopqrstuvwxyzæœffffffffff

£1234567890- , - , l p ( ) □ \* † ‡ § || ¶ — “ ” . , / 2 1 2 1 1 2 3 4 5 6 7 8 9 0

FIG. 2—A FOUNT OF BOOKWORK TYPE

stages of alphabetic history show that the pictograph (a sign as an eye-picture suggesting some object), the ideograph (a sign as an eye-picture suggesting some name), and hieroglyph (a conventionalised eye-picture representing a sound), had each a definite relationship to the sound which it represented It was from forms like these that our roman alphabet was developed

## LEGIBILITY

A letter is a conventional symbol which has a definite significance when used with its fellows If these conventional symbols are to function effectively, each symbol must be quickly recognisable. Printed matter which is hard to read imposes a strain that may prevent a reader from giving the words the attention which is necessary to understand their meaning.

Legibility may be said, generally, to depend on three abstract qualities: simplicity, having only essential parts, distinction, having marked characteristics, proportion, each part having its proper value.

The design of printed letters, therefore, should be of a form that is familiar, shaped according to the proportions which are now accepted as traditional. A set of letters not made in accordance with these principles will generally be difficult to recognise, and consequently as trying to read as some form of simplified spelling. They will not seem familiar and will require an effort to be distinguished before they begin to crystallise as word-pictures. Fancy types, decorated and floriated letters are all departures from the basic forms, and are in a lesser or greater degree hard to read. Letters should preserve their normal shapes without being distorted or obscured by unnecessary flourishes or embellishments. There should be a consistent treatment in every letter and a striking family resemblance between all the letters of a fount. Such distortions as bold, condensed, and expanded forms are not so legible as normal width letters. Fig. 3 shows a normal capital B, with condensed and expanded versions. Neither of the variations from the standard form increases the B-ishness of the letter. The other forms shown demonstrate that the legibility content of the letter is more apparent in the prototype because it is easily recognisable as the current symbol for a common sound.

The desire to differ from the normal form is due to a wish to introduce novelty into letter design. The primary function of a letter is to get itself read as a part of a word. Any novelty that is introduced must therefore be limited.

There may, of course, be minor departures from the code which serve to give distinctiveness to a collection of letters, but these departures should never be made by sacrificing legibility or they will disturb the reader's sense of the traditional convention and prevent smooth reading.

The factors which affect the legibility of letters may now be discussed. First of all, those that relate to their form. (1) The size in proportion to body of lowercase letters between the mean-line and the base-line, known as the *x-height* (see Fig. 4). The *x-height* bears an important relationship to the height and depth of ascending and descending lowercase letters. It is obvious that if the design of the face demands the use of

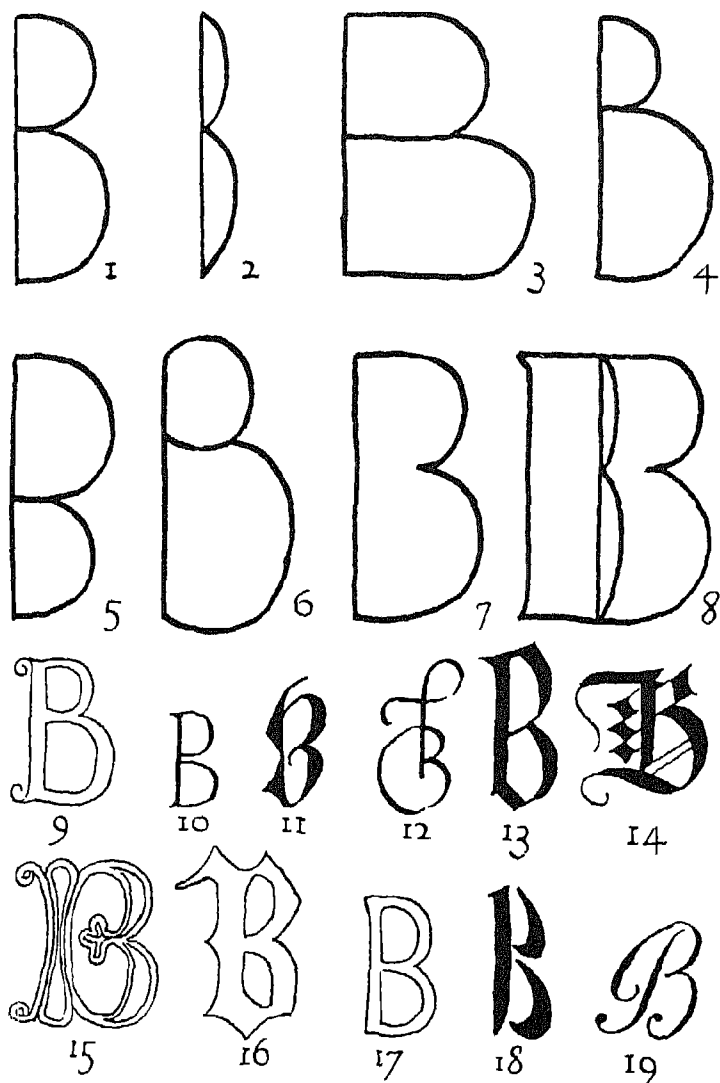


FIG. 3.—ESSENTIAL FORM OF CAPITAL B AND VARIATIONS FROM IT (1) normal, (2) too narrow, (3) too wide, (4) and (5) disproportion of parts, (6) wrong disposition of curves, (7) and (8) exaggerated parts, (9) manuscript, ninth century, (10) Roman epigraphic, (11) Tory, 1529, (12) Palatino, 1545, (13) Lombardic, (14) German gothic, (15) Westminster Abbey, 1272, (16) Westminster Abbey, 1400, (17) North Italy, 1430, (18) nineteenth century, (19) Spanish, 1776

long ascenders and descenders, the x-height must consequently be reduced, if they are short, the x-height will be increased. The effect of a small x-height is to give more space between the type lines, consequently a type face with a small x-height does not need generous leading. The following is a comparison of the x-heights of some well-known faces of the same body size.

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## Estienne Bodoni Gill Sans Plantin

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FIG 4—COMPARISON OF X-HEIGHTS

Very Small	Locarno, Nicolas Cochon
Small	Estienne Old Face, Perpetua, Caslon Old Face, Baskerville, Garamond, Bembo, Goudy Modern
Medium	Bodoni, Fournier, Polphilus, Granjon, Venezia, Tiemann, Erbar, Imprint, Weiss
Large	Goudy Old Style, Gill Sans, Kennerley, Bell, Plantin 110, The Times Roman
Very Large	Ionio 5, Rockwell

(2) The area within the inside of a letter, called the *counter*. This space has a considerable effect on legibility, and generally those faces with generous counters are easier to read. Linotype Ionio 5 and The Times Roman are faces with open counters, and were designed to obviate ink traps or the accumulation of ink in narrow openings. The conditions of newspaper printing with dry matrices, rubber inking rollers, high-speed presses, stereotyped plates, were the disadvantages that had to be overcome in designing these special faces. Incidentally The Times Roman has also proved itself to be an excellent book type (see Fig 5)



(3) The adjustment of the face on the body is called the *filling*, and is the space between the letters when they are set in the normal way. It can be varied by the insertion of space between the letters. Lowercase letters are designed to fit closely, and letterspacing (or interspacing) tends to destroy the picture which a word makes to the eye. Letterspacing of lower-case letters has been used in Germany and also by Bernard Shaw to indicate emphasis, i.e. as an ineffectual substitute for *italic*.

The invention of Printing from movable types was one of the chief events affecting the history of European civilization. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type. Prejudiced connoisseurs in the fifteenth century deplored the new

The invention of Printing from movable types was one of the chief events affecting the history of European civilization. The task of duplicating texts without variance was impossible before Gutenberg equipped the scholar with the accuracy of type. Prejudiced connoisseurs in the fifteenth century deplored the new mass-production of books, but men of letters eagerly hailed the printing press as a method of disseminating knowledge in permanent form, and the earliest

FIG 5—IONIC 5 AND THE TIMES ROMAN

Unless there are special reasons, lowercase letters should not be interspaced. Words set in capitals and small capitals should always be hairspaced so that the *apparent* space between the letters is equal; the word RAILWAY would need space between the first four letters only, for instance. Adjustments should always be made where necessary between adjacent letters that carry gaps, such as L and A, R and A. Combinations such as L and Y, W and A will need no space.

(4) The stressing or thickening of the strokes. With the exception of some sans-serif and Egyptian type faces, most designs have strokes which are contrasted. This disposition

of the thick and thin strokes in a letter may vary from Rockwell (Fig 6) where the disparity is slight to Plantin 110 where there is more contrast, and to Bodoni where the contrast is considerable. The disposition of the thick strokes was first determined when the letters were formed with a pen, and strokes which would have been formed with a downward stroke of a pen are usually thicker than those made with an upstroke. This matter is considered later when the design of types is discussed.

## Rockwell Plantin Bodoni

FIG 6--SHOWING VARIATION IN STRESS

(5) The angle of shading. The main division of roman types is into Old Face, Old Style, and Modern. The first two may be considered together, as Old Style is a modernised Old Face. The Old Face follows the form given to it by the Italian humanistic scribes, the first roman types were modelled on the humanistic manuscript hand. These scribes used quill pens cut to an angle at the end which gave a thick stroke in one direction, changing gradually to a thin stroke when the pen was moved in a contrary direction (Fig 7). It will be seen that the thickening of rounded forms of Old Face and Old Style type letters such as C, O, B, c, d, is usually not across the horizontal axis of the letters, but that the angle of

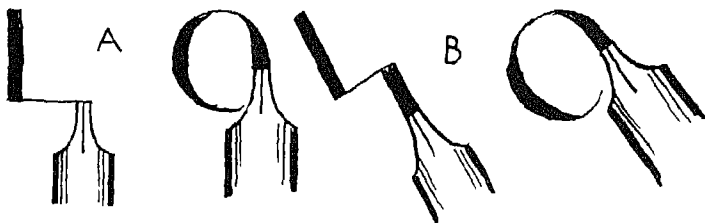


FIG. 7—SHOWING HOW ANGLE OF SHADING IS PRODUCED BY BROAD-NIBBED PEN  
(a) upright, (b) oblique

shading or stress is oblique. It is sometimes regularised (as in Caslon Old Face). In a Modern type design the angle of shading is consistently horizontal. It is important to note here that this angle of shading is uniform throughout a fount

and is supported by and complementary to the thick and thin strokes

(6) The treatment of the serif The serif is generally an aid to legibility because it denotes clearly the end of strokes, and also because it serves in some letter combinations to decrease the resemblance between certain letters such as *i*, *l*, and *I*. The serif originated through a technical difficulty in stone cutting, its form being determined by the V-shaped chisel and the need to round off the ends of the letter strokes. The serif has many variations. In Bodoni it is a hairline, squared and flat, in Egyptian it becomes thickened to a slab, in Old Face types it is bracketed (rounded on the insides), in Bold Latin it is bevelled. Some of these variations are shown in Fig. 8. These different forms affect legibility. The horizontal serifs of the Bodoni type coupled with the parallelism set up by the

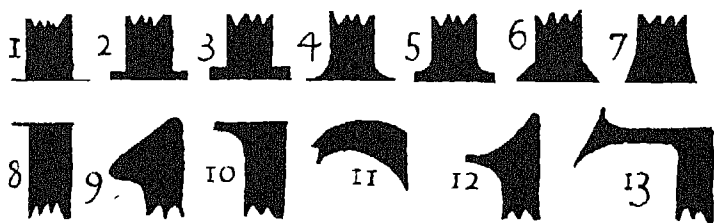


FIG. 8—VARIATIONS IN THE FORM OF SERIFS. (1) hairline as in Bodoni, (2) and (3) fine and heavy slab, as in Rockwell, (4) bracketed, as in Scotch, (5) slab-bracketed, as in Cheltenham, (6) bevelled, as in Bold Latin, (7) blunt, as in Albertus, (8) unbracketed, as in Bodoni, (9) oblique, as in Old style, (10) bracketed, as in Scotch, (11) sheared, as in Perpetua, (12) cupped, as in Garamond, (13) spurred, as in Garamond

consistent vertical thickening and the strong contrast in thick and thin strokes tend to make it difficult, or at least wearisome, to read. The spiky spurs to many of the characters of Garamond also deter even travel along the line and react on the eyes.

(7) The comparative width (or set) of the letters. A condensed type has a small set width, and its condensation tends to make it difficult to distinguish the letters. The narrow width of the newspaper column has largely contributed to

the demand for condensed display types, and the cause of legibility has fallen before the trumpets of expedience. Slight condensation in a letter design, however, is often an economic aid, and the value of a type face in conserving space without impairing legibility may be profitably examined in the edition of Guy de Maupassant set in Monotype Fournier. On the other hand Baskerville, notably of wide set, was, before the need for economy in paper, fast becoming the standard text type of the better English book. These faces (Fig. 9) may owe in some part their popularity to the fact that they represent a compromise between the two main streams of roman type design, Old Face and Modern \*

#### "MONOTYPE" BASKERVILLE

8-point (8½-set)

Two type faces set in parallel columns, to the same measure. One is invaluable for "driving out" a book, the other economizes space where there is need of that opposite virtue. Esparto paper and a wide-set type face make more pages for a meagre novel, a narrow

#### "MONOTYPE" FOURNIER

8-point (7½-set)

Two type faces set in parallel columns, to the same measure. One is invaluable for "driving out" a book, the other economizes space where there is need of that opposite virtue. Esparto paper and a wide-set type face make more pages for a meagre novel, a narrow-set letter and thin paper make

11-pt. (10½ set), same Words and Spacing make shorter line in 11 pt (9½ set)

A difference of more than 50 pages in a 60-thousand-word book is made by the

A difference of more than 50 pages in a 60-thousand-word book is made by the

FIG 9—COMPARISON OF SET WIDTHS OF BASKERVILLE AND FOURNIER

(8) The emboldening of the basic form of a letter is another factor which normally tends to reduce instant recognition, although custom has nowadays brought many of the familiar bold types within the limits of immediate recognition. The apt use of bold faces helps to distinguish between things that differ, and it may be said to help legibility by aiding selection. In a catalogue it is essential to help the reader to *choose*, and by setting the various component parts in different kinds of designs of a related type family the reader is enabled to judge by the urgency, as it were, of the

\*The need for economy in the use of paper has led to a decline in the use of wide-set types and designs that are large on the body and slightly condensed designs (such as The Times Roman) are now more widely used

letter form that certain parts of the text are more important than others. It is possible by using a roman type and its related bold to have as many as nine variations

ORDER OF EMPHASIS: **FIRST**,  
**SECOND**, *third*, **fourth**, **FIFTH**  
**SIXTH**, SEVENTH, *eighth*, ninth

The second set of factors affects the use of letters. Apart from the necessity for good form in individual letters, legibility depends largely on the manner in which type is arranged. There should be an agreeable closeness or linking of word to word when type is set in massed lines which will require to be modified according to the set of the type and with due regard to appropriate leading, so that the reader may grasp the matter without undue effort. Closely packed lines must also be avoided. Matter set out in the form of a design in large and small sizes of type (called *display*) also requires careful treatment in the actual arrangement of the words as well as the design which they make

(1) The measure or length to which the type lines are set should be related to the size of the type. A ready method of deciding a suitable measure to which any given type should be set is to calculate it from the length of the complete lower-

abcdefghijklmnopqrstuvwxyz  
 abcdefghijklmnopqrstuvwxyz  
 abcdefghijklmnopqrstuvwxyz

FIG 10—ALPHABET WIDTHS OF CENTAUR, GARAMOND, AND SCOTCH (12-point)

case alphabet, which is known as the a-z length. As a wide letter may be set to a longer length and *vice versa*, this method assures that the measure is related to the set of the type face. A satisfactory limit may be set by using the alphabet as a minimum and three alphabet widths as a maximum. The

maximum measure would allow an average of about twelve words to the line, the ideal is an average of ten

(2) If this measure is exceeded, the lines should be leaded so that the eye may pick up successive lines without beginning to re-read the same line. Hard-and-fast rules in this respect are difficult to lay down, and every job needs to be considered on its own merits. Some work needs more leading than another, particularly if it is of an abstruse or technical nature. Nowadays the best book practice would indicate that fairly generous leading is desirable. Leading is a comparatively modern usage and is a substitute for long descenders or a connective to a line which is too long. Lines may be set to almost any length if there are only three, beyond this there may be difficulty in picking up the successive lines, "doubling" as it is called. Baskerville, Plantin, Bodoni, Scotch are faces that may generally be leaded with advantage. It would be advisable for those houses whose work involves considerable settings of text matter to experiment with various faces, sizes, and measures with a view to determining the most suitable amount of leading before deciding the typography of a book or job. Nowadays printers realise that it is important for the print-planner to have such specimens, and he usually takes care to see that they form part of his type-specimen book.

Leads are thin strips of lead which are made in various thicknesses 1-point, 1½-point, 2-point, 3-point. Reglet is another form of spacing material which is used for making larger spaces between the lines. It is made of wood in 6-point, 12-point, and 18-point thicknesses. Wood of greater thickness is also used for various spacing purposes, mainly for making the margins of booklets and books. It is called wood furniture, and is made in 24-point, 36-point, 48-point, 72-point, and 96-point, which thicknesses are usually referred to as 2-em, 3-em, 4-em, 6-em, and 8-em.

Types with long ascenders and descenders, even when set solid (that is, without leads between the lines), give the appearance of being leaded. Types of large x-height may generally be improved both in appearance and legibility by

leading, the type lines do not then seem so oppressive. Paragraphs usually have the same space between them as the type lines unless there is a special reason, as, for example, where each paragraph carries an initial or where there are no paragraph indentions. The space between paragraphs in such cases should be increased to at least twice that between the



FIG 11—THICKNESS OF LEADS

lines. When the paragraphs are indented extra space is not necessary. The indention should not be too generous unless it is used as a display feature. In normal setting one em of its own body is sufficient, and it is generally inadvisable to make it less than this amount.

In the matter of length of line a double-column page is preferable from both practical and aesthetic points of view, rather than the use of a line which is too long or which is insufficiently leaded.

Spaces and quadrats ("quads") are used to blank out between words and at the ends of paragraphs. The thinner blanks are called spaces and the thicker ones are called



FIG 12—SPACES AND QUADS. Hairspaces (about 8 to the em), thin (or 5 to the em), middle (or 4 to the em), thick (or 3 to the em), en (or 2 to the em), em quad, 2-em quad, 3-em quad, and 4-em quad.

quads. Spaces and quads usually have no nicks, they may be turned in many positions. The em quad is the square of the body of any size of type. Thus a 10-point em quad is ten points wide and ten points deep. An en quad is one-half of an em quad, a thick space is one-third of an em quad, a middle ("mid") space is one-quarter of an em quad, a thin space is one-fifth of an em quad. It will be seen that by using these

various spaces in combination with each other the spacing between words may be varied so that each type line is spaced to exactly the same measure

On Monotype composing machines the em quad is related to the width-standard of the type design. A type design which is of narrow proportion (narrow "set") has an em which may not be identical in width to its body. A 10-point type may be  $8\frac{1}{2}$ -set, the em will therefore be 10 points in body and  $8\frac{1}{2}$  points wide. In this way the spacing is related strictly to the design and is, in general, narrower than with a fount of wider set, such as a 10-point, 10 set.

(3) Word spacing is governed largely by the set of the type and the kind of subject-matter. A book page is usually easier to read when the spaces between the words are just sufficient to separate the words into units. Advertising copy is often more widely word-spaced (with a full em space or more between sentences to slow down the reading speed so that the sense of the matter may sink in) and leaded (to avoid overcoming the reader by the mass effect of the type). Grant and Legros say that the space between two words should never be less than an en, others maintain that 2 mm (about  $5\frac{1}{2}$  points) should be the minimum. These judgements do not accord with the best current practice in ordinary bookwork. The thick space is obviously too much for compact setting unless it is regarded as a maximum, and a middle space probably represents the best practice. Widely spaced matter will produce the ugly network known as "rivers," and the lines should seldom be widely spaced unless it is absolutely unavoidable. It is better to divide a word rather than space the line too widely. Wide spacing makes type hard to read, gives it a jumpy, jerky appearance as a whole, and fills the page with white gutters. Occasional unavoidable wide lines may be obviated by a change in the wording. Copywriters and others will remember (should they be inclined to receive this statement with consternation) that a writer of the eminence of Bernard Shaw prefers to do this rather than mar the appearance of a page. *This page is an example of good word-spacing*



The early printers did not insert an em space after the sentence unless it was intended to take some kind of illumination. The full stop at the end of a sentence and the capital letter are quite sufficient to mark the end of a sentence. The space after a full point should be the same as that in the rest of the line. The lax practice of putting additional space after full points should be abandoned. There is no sound reason for it, as the position of the full point itself gives the appearance of extra space. In cases where the first letter of the sentence carries a space of its own on the left side, such as T, V, W, Y, less space may be allowed after the full point.

There are other instances where care will improve spacing. When a capital letter is open at the top, such as A, O, no thin space is necessary between it and quotation marks (" "). In display work quotations may be placed in the left margin and successive lines ranged on the left under the first letter of the first line:

"BREAD is the staff of life"	<i>not</i>	"BREAD is the staff of life"
---------------------------------	------------	---------------------------------

Dashes, again, need special treatment. They should divide parts of sentences, not link up words. This misuse of the one-em dash is very marked in lines which are widely spaced: a slight space before and after the rule makes for clarity. An exception to this practice may be made in those cases where either of the letters carries a space of its own (such as T—A, x—v, t—y); the space may also be omitted in tight lines where the letters against the rule are rounded (b—o, e—q).

Some of these practices may be unfamiliar to a few printers, who may consider them to be innovations, in spite of the practice of Aldus and Jenson. The keen typographer and compositor will readily appreciate the improvement which these small points give to a mass of type. It is only in this century that logical spacing has been restored to printed matter, although there are still some printers whose body matter is uninteresting and patchy because of their inattention to these common-sense principles. Bad practice is hard to kill, and any attempt to restore a good standard is often

regarded as revolutionary, and therefore subversive. The practices advocated here are, however, merely a reversion to the practice of the masters of the fifteenth and sixteenth centuries.

The foregoing observations will serve the reader as a guide to the wide aspect in which legibility, and therefore readableness, has to be considered. There are at least a dozen other factors which have not been discussed, such as lighting conditions, colour and finish of the paper, distance from the eyes, familiarity of the reader with the subject-matter, eye fatigue, visual acuity, and so on. Several attempts have been made to reach finality. Some of the conclusions arrived at may be studied in Grant and Legros and in the report on the legibility of print by Pyke.

The colour of the paper may also be considered in its bearing on legibility. Some authorities favour yellow paper, although others say that it causes bluish after-images. Pale grey has been suggested and used by Eric Gill and *The Penrose Annual*. It is, however, agreed that unglazed paper is to be preferred, and that it should be opaque enough for the print not to show through and disturb the reader by mutterings from the other side of the paper. With regard to the colour of the ink on the paper the following has been given as an order of legibility: black on yellow, green on white, red on white, blue on white, white on blue, black on white, yellow on black, yellow on purple, white on red, white on green, white on black, red on yellow.

Finally, to read means to recognise printed or written symbols. Recognition does not imply comprehension. A child may be able to recognise every letter in a book on relativity or a book in a foreign language. It is difficult to say to what extent this affects absolute legibility, but it is a factor that must be considered when experimental tests are used on different subjects and the results of those tests offered as a conclusive guide to those who are concerned with planning printed matter that shall be easily and comfortably read. It is perhaps doubtful whether there is an absolute legibility for everyone.

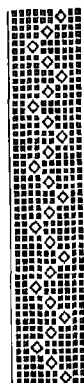
Another matter that needs to be discussed in its relation to legibility is the arrangement of the printed matter on the paper page. Margins, for instance, need to be proportionate to the area occupied by the text, and to give sufficient space for the thumb to hold without trespassing on the type area. Very meagre margins do not hold the eye within the page, and distractions outside that area may affect the reader and disturb comfortable reading. The depth of the type page should be in a pleasing proportion with the measure to which the type is set. These matters will be discussed more closely in the chapter which follows.

#### TYPE FACES AND THEIR SELECTION

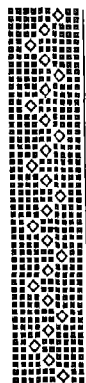
The individual characteristics of a font of type may suggest certain ideas or arouse a definite train of thought. Every type face has its own tone of voice and, as there are probably as many type faces as there are types of people, it is often possible (Fig. 13) to choose types to accord with the copy. As we choose our speech according to the person whom we address, so is it possible to use type faces which are analogous. The design of certain types suggests various degrees of urgency, insistence, or persuasiveness. Certain statements often need special emphasis, parenthetical remarks inserted between main arguments need their own force. This analogy can be used in the selection of the type faces for any particular purpose. Some faces look crisp and business-like; Blue books and official publications are often set in Modern types. Other type faces are graceful and have more charm than the plain Old Styles or the stiff Bodonis. There are also charming italics suitable for more informal kinds of printing. Generally, allusiveness in typography can be secured by the arrangement and the use of alternative alphabets of capitals, small capitals, italic, and related bold face. It is unwise to imagine that there is a type face which perfectly reflects the commodities which are being advertised. Advertisers often attribute to certain faces typographical connotations that are wholly imaginative. It has been suggested by one author that there

THE CHARM OF  
OLD SILVER

well-cut  
clothes



CARPETS

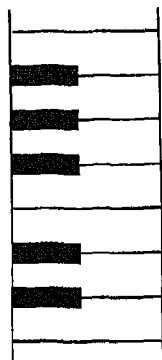


E UP and  
M see us  
O sometime  
C

Louder  
please!

"SCRIVERE"

*writing pad*



GROTRIAN  
SMALL GRAND  
PIANO

Remove that  
superfluous  
**fat**

FIG 13—LEGITIMATE USE OF TYPE DESIGN TO SUGGEST ATMOSPHERE AND SECURE SYMPATHY WITH THE SENSE OF THE SUBJECT-MATTER

is a "hide suite" type and a "filing system" type, and that a book about "Dark Africa" should be set in a black type! One wonders what type this author would use for a book about the "Snow-capped Arctic."

Many printers and advertisers imagine that the latest types are essential to good display and that only the latest types can be used for effective advertising purposes. While, of course, a novel type face often gives originality and freshness, at the same time the effect of a well-designed job lies necessarily in its arrangement. No combination of type characters, however fresh, can give the clear and legible sanity of presentation which is obtained by correct balance, right spacing, and pleasing harmony between component parts. Nevertheless uniqueness in type design may be an advantage for certain kinds of ephemeral printing because it is original and fresh. The value of this kind of uniqueness in type, however, is limited, and fancy founts should be used with restraint and discrimination.

In display work legibility and distinction are of utmost importance, but the requisite qualities of a display face and a book face are not necessarily identical. In a book face, legibility combined with smoothness is essential, and eccentricity or oddness is an impertinence. The eye must be able to travel along the lines and absorb the word groups without conscious effort. A recent gramophone advertisement read: "The gramophone you cannot hear, you only hear the music." A readable type face might be described as a "type face you do not notice, you only absorb the word groups."

The classification of every existing type face—there are probably about ten thousand—would fill a large volume. It has been attempted, but not successfully. It would, in any case, be out of date in six months.

The history of type design is mainly a history of constant revivals, and reflects the desire for variety and novelty which prevails in every form of art and craft. The transition through Sweynheim and Pannartz from the gothic or black-letter type of the earliest printers to the perfect roman of Nicolas Jenson, the revival by Whittingham of Caslon's Old Face, the

revival of the Fell types by the Oxford University Press, William Morris's revival of Jenson's type, all bear witness to this ceaseless quest for change. So-called new types appear almost daily, but analysis shows that the majority of them are revivals or merely adaptations for modern use of historic letter forms, which have been designed or revived to cater for the particular taste or purpose of the day.

It is proposed here to deal with the main groups under which most types may be classified, and therefore more readily identified.

The variety of type faces available to-day is so wide that the typographer is more likely to be confused than assisted in his choice of suitable faces. Most printing offices choose their equipment to deal with certain kinds of work and accept only that class of work which they know that they can deal with efficiently and profitably.

The following pages will show only a few of the types in use to-day, to give complete lists would merely confuse the reader, who is best left to cultivate his own judgement and taste by collecting his own private reference of type faces. Certain designs are available in more than one version, and some are almost identical. The reader may be helped in the latter case by Mr. H. E. Waite's little manual, *Alternative Type Faces* (London, 1936).

#### GOTHIC TYPES

During the latter part of the eighth century, Charles the Great decided to revise the corrupted texts of the Scriptures and works of the fathers, and in this work he was assisted by the Englishman, Alcuin of York. A great deal of this work of rewriting was done at the Abbey of St. Martin at Tours, where Alcuin was abbot from 796 to 804. The form of the letter which was developed (called the caroline hand, after Charlemagne) became ultimately the prototype of our roman type forms. The caroline minuscule is a beautiful and easy-flowing form of writing and evolved from the national (Merovingian) minuscule under the influence of

copiosilactis effluere. Puer. sur-  
 rexit incolomis. Nos obstupefacti  
 tanta re miraculo. id quod ipsa  
 coquebat ueritas fatebamur. Non

FIG 14—CAROLINE MINUSCULE (NINTH CENTURY)  
 (from Maunde-Thompson)

Si peccauerit princeps &  
 fecerit unū de pluribz p-  
 ignoratiā. qd dñi lege ph-  
 bet. & postea intellexerit  
 peccm suū. offeret hostiā  
 dño. hyrcū decapris in-

FIG 15—GOTHIC WRITING (TWELFTH CENTURY)  
 (from Maunde-Thompson)

the half-uncial (which was itself a cursive form of the roman capital letter) It gradually penetrated the limits of France, superseding the various national hands such as the Beneventan in Italy and the Visigothic in Spain Students who wish to study this development are advised to consult Maunde-Thompson's *Greek and Latin Paleography* (Oxford, 1912)

By the twelfth century the form of the writing had changed, and the scribes in England, Germany, Flanders, and France were using an elongated, pointed, angular letter From the tenth to the twelfth century this tendency to compress letters laterally to economise space caused curves to give place to angles, which resulted in a form which is to-day called gothic (see Fig 15). In Italy and Spain alone was the earlier rounder hand preserved, and even in these countries the letter was effected by the gothic tendency.

In the fifteenth century, under the influence of the literary and artistic movement now known as the Renaissance, the caroline minuscule was revived by such masters as Niccolo Niccoli. This neo-caroline letter was enthusiastically received in literary circles and created a new interest in beautiful writing. The scribes who revived this letter called the black letter "gothic," meaning barbarous, in the same way that much later Christopher Wien (who revived the classical trabeated mode of architecture) called the Early English, Decorated, and Perpendicular styles "gothic" The Renaissance scholars treated printing when it arrived as the cheap substitute for the written book that it was and at first refused to allow printed books in their libraries When the beautiful humanistic manuscripts of the fifteenth century are compared with the heavy gothics and semi-gothics of the first printed books, it is easy to understand their contempt.

Gothic, then, is a corrupt version of the caroline minuscule and was the form of letter adopted by the first printers in Europe. It was copied from the current manuscript hand. So closely did they copy it that Johann Fust is said to have actually sold some of his printed sheets in Paris as manuscripts. The early printers used three kinds of gothic types—



Light English Text

A B C D E F G

H I J K L M N

O P Q R S T U

V W X Y Z

a b c d e f g h i j k l m n

o p q r s t u v

w x y z

a pointed text, a round gothic, and a cursive gothic. The pointed text and round gothic eventually developed into the modern German *fraktur* and *schwabacher* respectively.

Modern forms of gothic often vary considerably from their historic originals. The use of these types is, by its associations, limited, and is generally confined to legal and ecclesiastical work. For some unaccountable reason they are also occasionally used for visiting cards, invitations, wedding announcements, and acknowledgements of condolences.

The following are representative of those in use to-day. Cloister Black, Tudor Black, Goudy Text, Light English Text.

## Cloister Black Tudor Black Goudy Text

### VENETIAN TYPES

Apart from the decorative but degenerate black-letter, roman types are of four main kinds: Venetian, Old Face, Modern, and Old Style.

Roman types were first used in Germany about 1465 by Adolf Rusch, but were developed in Italy to whence many of the German printers were dispersed after the sack of Mainz (where the invention of printing was perfected) in 1462. A transitional letter between the black-letter and the true roman form was used by Sweynheim and Pannartz, who set up a press at the Benedictine monastery at Subiaco near Rome, 1465-7. The roman form was perfected at Venice by the da Spira brothers and Nicolas Jenson. Jenson's roman type is still considered by many authorities to be a fine form of the roman letter and has been used as a model by Sir Emery Walker (for the Doves Press), William Morris at his Kelmscott Press, Bruce Rogers as the basis of his Centaur type, and the American Type Founders Company for the Cloister Old Style.

Present-day types of the Venetian school are Nicolas Jenson, Italian Old Style, Cloister Old Style and Cloister Old

CENTAUR ROMAN AND ITALIC

A B C D E F G H I J K

L M N O P Q R S T

U V W X Y Z

a b c d e f g h i j k l m n o

p q r s t u v w x y z 1 2 3 4

*A B C D E F G H I J K*

*L M N O P Q R S T U*

*a b c d e V W X Y Z f g h i j*

*k l m n o p q r s t u v w x y z*

of these new designs was used by Robert Estienne about 1531, and was probably cut by Claude Garamond. It was very soon adopted by the Paris printers, and was later introduced into England by John Day.

In historical sequence there are the following Old Face types: Bembo, Poliphilus, Estienne, Granjon, Garamond, Caslon, Plantin, Elzevir, Impunt.

Probably the best-known of these is Caslon Old Face, which was originally designed by William Caslon in 1720, and of which there are several versions. The various sizes of this face have different characteristics and the individual letters are rather irregular. The A is cupped at the top, the Q is freely kerned and flourished, the upper loop of e is small, T has triangular arm serifs, the comma is comparatively heavy, and the s is narrow. Its merit as a design has been considerably overrated.

In Bembo the M is splayed, the top arm of K is curved, the top of A is horizontally sheared, the W is crossed, the R has a long tail, b has no foot serif, t has a long and fairly heavy cross-stroke, a has a small flattened sloped bowl, g has a large loop and heavy ear, w has three top serifs.

Poliphilus has a P with an unjoined loop, straight vertical-sheared tailed Q, slightly elongated lower curve to the C, crossed W, lumpy head serifs to the ascenders, narrow e with small loop, q with a left serif only, unserifed s, p with loop beginning with an angular slope, and a pronounced kern to the f.

Garamond and Granjon have small upper loops to e, the s and a are narrow, ct and st ligatures. In Garamond the W is crossed, in the w the first upstroke ends in the centre of the mainstroke, and the serifs are short and spiky. The American Type Founders' version of Garamond has not such pronounced spur-like serifs. Granjon is a revival of Claude Garamond's type; the types called Garamond are usually those designed by Jean Jannon in 1621, and which were at one time mistakenly attributed to Garamond. The objection to the so-called Garamond type is its spiky serifs, which tend to dazzle the reader's eye, this objection is notably absent in Granjon Old Face.

BEMBO ROMAN AND ITALIC

A B C D E F G H I J  
K L M N O P Q R S  
T U V W X Y Z

a b c d e f g h i j k l m n o

p q r s t u v w x y z I 2 3

*A B C D E F G H I J K L M*

*N O P Q R S T U V W X*

*a b c d e f Y Z g h i j k l*

*m n o p q r s t u v w x y z*

*1 2 3 4 5 6 7 8 9 0*

## POLIPHILUS

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890

*(The italic is shown on page 45)*

## GRANJON

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890

## GARAMOND

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*ABabcdefghijklmnopqrstuvwxyzMT*

## "MONOTYPE" CASLON OLD FACE

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*ABCabcdefghijklmnopqrstuvwxyzNR*

PLANTIN

ABCDEFGHIJKLMNOPQRSTUVWXYZ

QRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*QRSTUVWXYZ*

*abcdefghijklmnopqrstuvwxyz*

OLD STYLE 33

ABCDEFGHIJKLMNOPQRSTUVWXYZ

RSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

IMPRINT

ABCDEFGHIJKLMNOPQRSTUVWXYZ

QRSTUVWXYZ *ABCDEFGHI*

abcdefghijklmnopqrstuvwxyz

*abcdefghijklmnopqrstuvwxyz*

Garamond (1480-1561) and Granjon (c. 1520-90) supplied punches of types to Christopher Plantin, the Antwerp printer, whose revived design, cut from a specimen in the *Index Characterum* of 1567 and probably the work of Garamond, may be recognised by its angled serifs and curved brackets, crossed W, wide-splayed M, pointed curve on J, unclosed loop of P, thickest part of the stress is low in c, e, d, and high in b and p, flat tail of Q. There is also a light version.

Elzevir is a condensed, weak-looking face with similar characteristics to Plantin. The capitals are almost of equal width, the W does not cross, the R has a tail similar to the Venetian R but which fades away at the end, the thickest parts of the curves are disposed as in Plantin. Linotype Old Style 33 is a stronger letter of similar design.

Imprint is a recutting of Caslon's design without its irregularities and with a larger x-height. It has thin straight foot serifs with small brackets, the t has a pointed top, and the o has a horizontal stress.

An interesting type design of later period is that of John Baskerville, which is a transitional face between Old Face and Modern. Since its revival it has won a wide popularity and appears to be ousting Caslon Old Face as the distinctly English letter. Its agreeable roundness makes it the ideal wide letter for bookwork. In its design it foreshadows the Modern design and, in the italic, avoids the irregularities of the Old Face italics without rigidity but at the sacrifice of a certain robustness. The Baskerville of Stephenson, Blake & Company Limited is a later version cut by Dr. Fry. Baskerville may be identified by the projection of the lowest arm of E, the unclosed loop of g, the double-serifed C, the unserifed centre of w and W, and in the Monotype version by the long flattened foot with ball terminal of J, scythe-tailed Q, and generously kerned italic letters. It is the type used in this book.

#### MODERN TYPES

The "modern" tendency in type design is first seen in the *romain du roi* of Philippe Grandjean (1693), where the serifs



BASKERVILLE

A B C D E F G  
 H I J K L M N O P  
 Q R S T U V W  
 X Y Z  
  
 a b c d e f g h i j k l m  
 n o p q r s t u v w x y z  
  
 £ 1 2 3 4 5 6 7 8 9 0

*(The italic is shown on page 45)*

are flat and unbracketed. The Old Face serif and the Modern serif are compared in Fig. 16. This new design through Louis Luce was developed by Pierre Simon Fournier about the middle of the eighteenth century, who first called the design "Modern." One of Fournier's type designs, a slightly condensed letter called Fournier, may be identified by the flat-footed t, the turned-up foot of b, the equal bowls of B, the double-curved tail of R (usually a note of Modern designs).

men men

FIG 16—OLD STYLE AND MODERN SERIFS COMPARED

It simplifies many features of the Old Face design without being as rigid as the later Modern designs. Fournier's designs were carried to a greater stage of development by Giambattista Bodoni of Parma, who was, in his early career, Fournier's disciple. In the eighteenth century Modern types arrived in full force. They became the taste of the day and were considered to be a style of simplicity and severity. Bodoni's four criteria were regularity, neatness, charm (*grazia*), and good taste. The fashion of Modern types lasted for about forty years, the Old Face was then revived in England by Pickering the publisher and Whittingham of the Chiswick Press about 1844-5.

The Modern design owed its popularity to its presumed elegance and grace. The best examples are well designed, of good proportion, with well-marked contrast in thick and thin strokes. These characteristics do not necessarily make a readable letter; the vertical serifs seem to cut off each letter rigidly from its neighbours and tend to keep a reserved and coldly chiselled atmosphere about it. It is doubtful, however, whether it has deserved the castigation levelled at it by William Morris, who called it "swelteringly hideous."

The Scotch design, introduced in 1837, is one of the numerous Modern designs, the principal change being in the

rounding of the serifs inside; Bodoni's serifs are flat, sharp, and unbracketed

Unfortunately the introduction of the fashion of Modern types led gradually to a decline in printing in Europe, possibly because the original design of the face was capable of a greater degree of grotesqueness than the Old Face, which also had the tradition and practice of the years behind it. Witness the fat face of Thorne (1850), one of the earlier display type designs

Apart from the many designs of Modern types, usually

# FOURNIER

ABCDEFGHIJKLMNOPQRS  
 12345 TUVWXYZ 67890  
 abcdefghijklmnopqrstuvwxyz  
*ABCDEFGHIJKLMNOPQRSTUVWXYZ*  
*abcdefghijklmnopqrstuvwxyz*

designated by a serial number (such as Modern No. 17), typical present-day forms are Bodoni and a lighter version Bodoni Book, Scotch, and Walbaum

Bodoni represents the standard design and may be recognised by its horizontal hairline unbracketed serifs, abruptly changing angle of shading, low lower serif of G, claw-like tail of Q, crossed W, curly ball terminal of *k* and *y*

Scotch has no lower serif to G, G has a pointed spur to its lower arm, Q has a tail which curves from the inside, the capitals look a little heavier than the lowercase letters which fit rather openly, *r* has short lip, *t* has high mainstroke which is unbracketed, lowercase has fairly short descenders

Tiemann (for some reason called an Old Face) has all the characteristics of a Modern design and has much in common

## BODONI

A B C D E F G H I J  
K L M N O P Q R S  
T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t  
u v w x y z 1 2 3 4 5 6 7 8 9 0

*A B C D E F G H I J K  
L M N O P Q R S T U  
a b c V W X Y Z d e f  
g h i j k l m n o p q r s t u*

SCOTCH

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz

WALBAUM

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
*ABCDEFGHIJKLMNOPQRSTUVWXYZ  
TUVWXYZ  
abcdefghijklmnopqrstuvwxyz*

BELL

ABCDEFGHIJKLMNOPQRSTUVWXYZ 67890  
abcdefghijklmnopqrstuvwxyz  
*ABCDEFGHIJKLMNOPQRSTUVWXYZ 67890  
abcdefghijklmnopqrstuvwxyz*

with the manuscript form of letter known as half-uncial, which is a straight-pen letter with a horizontal stress

One of the most charming Modern faces is Walbaum, which is not so rigid as Bodoni's type. The serifs are unbracketed, A looks short, C has fine serifs, the curves of D are flattened, R has the curly tail but it is more rigidly formed, g has small upper bowl, m and n have flattish curves, s has very slight serifs, the two parts of w do not seem close enough together

Another interesting Modern face is that cut by Richard Austin for John Bell about 1790. It has been revived by the Monotype Corporation under the name of Bell. It has extraordinary interest and charm and bids fair to rival its immediate forerunner, the type of John Baskerville. Bell was the first English Modern design. It has somewhat less width than Baskerville, a little less colour, and the serifs are sharper. It may be readily identified by the double-curved tail of R, the unique rolled tail of the alternative k, cupped head of t, fairly large loop of e, and the fully bracketed serifs

#### OLD STYLE TYPES

The Old Style face is a revived or modernised Old Face. It was cut because there was a desire to correct the unevennesses of Caslon and other Old Face designs. The stems are generally slightly narrower, the hairlines a little sharper, and the serifs short, angular, and stubby. The greatest change is seen in the shortening of the ascenders and descenders, with a consequent increase in x-height. Its general effect is that of pleasing and restful monotony, and for that reason it was used widely as a text type before the revival in the 1920's and 1930's of other historic type designs

Old Style was originally cut by Miller and Richard of Edinburgh, and appeared in England in the middle of the nineteenth century. Old Face and Old Style faces are more comfortable to read than Moderns. The serifs tend to reach out to each other and suggest an onward movement in their curves. The serifs in a Modern type are generally longer and lighter, the fine lines are apt to break, and the spirit of the

GOUDY OLD STYLE

A B C D E F G

H I J K L M N O P

Q R S T U V

W X Y Z

a b c d e f g h i j k l m

n o p q r s t u v w x y z

£ 1 2 3 4 5 6 7 8 9 0

Modern design follows an engraver's ideal rather than a printer's. Old Style and Old Face types more truly follow the manuscript tradition as modified by the typefounder in the process of standardising the forms of written letters.

As in the case of Modern types, many Old Style type designs are known by a serial number, though there are many which have a definite title, such as Ronaldson Old Style, Cheltenham Old Style (also called Gloucester and Winchester). Contemporary interpretations of Old Style designs are Goudy Old Style, Kennerley Imprint (page 31) may also be considered as an Old Style design in the sense that it is a modernised Old Face.

### LUTETIA

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*ABG abcdefghijklmnopqrstuvwxyz MKR*

There are certain other type designs which are the work of contemporary designers and which do not owe their inspiration solely to an historic prototype.

Lutetia (designed by J. van Krimpen of the Enschede foundry) is a little Venetian in feeling. It may be identified by the high bars of E and F, high vertical of G, wide L, venetianesque R, long tail of Q, serified U, a has no finial, g has obliquely shaped bowl of tail, m is narrow, cross stroke of t is short on left and long on right, y has a flowing tail. Romulus is a more recent letter by the same designer.

Perpetua (designed by Eric Gill) is based on the superb stone-cut letters which this craftsman has made familiar to all students of modern epigraphy. It may be recognised by



ROMULUS

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*abcdefghijklmnopqrstuvwxyz*

PERPETUA

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*abcdefghijklmnopqrstuvwxyz*

PASTONCHI

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*ÀCÈabcdefghijklmnopqrstuvwxyzPQT*

## WEISS ROMAN

A B C D E F G H I J

K L M N O P R S

T U V W X Y Z

a b c d e f g h i j k l m

n o p q r s t u v w

x y z

£ 1 2 3 4 5 6 7 8 9 0

GOUDY MODERN

ABCDEFGHIJKLMNOPQRSTUVWXYZ

12345 UVWXYZ 67890

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*12345 STUVWXYZ 67890*

*abcdefghijklmnopqrstuvwxyz*

TIMES NEW ROMAN

ABCDEFGHIJKLMNOPQRSTUVWXYZ

12345 WXYZ 67890

abcdefghijklmnopqrstuvwxyz

*ABCDEFGHIJKLMNOPQRSTUVWXYZ*

*12345 WXYZ 67890*

*abcdefghijklmnopqrstuvwxyz*

several original features, notably the flat-topped A, equal bars of E and F, pointed tail of J, the finely curved tail of R, U with foot serif, sheared serif to top of c and f, slight flourish to the hip of r

Weiss (named after the designer, Rudolf Emil Weiss) is a German interpretation of the roman letter which has many innovations that are perhaps a disadvantage to its use for text matter. B has equal bowls, E and F have equal arms, M is unserifed in its upper strokes, U has a foot serif, W is crossed, S has equal bowls giving the appearance of top-heaviness, a begins with a serif, b and many other lowercase letters have oblique serifs, u has straight serifs, middle of w has no serif, z is wide.

Pastonchi (interpreted by Eduardo Cotti from the ideas of the poet whose name it bears) claims to be "a modern type which is independent and free from all exaggeration and eccentricity." Let the reader judge. It may be identified by very obliquely stressed O, short tail of Q, narrow P and R with small bowls, crossed W, lower serif to b, open g with unusual connecting link, curved upper stroke to k, narrow s with terminals obliquely sheared, turned-up foot to u, calligraphic x and y

Goudy Modern is not a "modern" in the same sense as Bodoni's letter, but has many similar characteristics. The capitals are lower than the ascending lowercase letters, many capital-letter serifs are wedge-shaped. A has a projecting main stroke, E and F have high crossbars, Q has long tail, W is wide and uncrossed, Z is very wide, end of a curves up, dots on i and j are not quite central, k has unserifed tail, m looks too narrow, q has no top serif, t is wide.

Another original contemporary design is that cut for the use of *The Times* newspaper and called The Times New Roman. It is remarkable not only as a successful solution to the problem of the ideal newspaper type face (because it is able to stand up to the methods of modern newspaper production), but also because it is likely to upset the terminology of type designs. This face has horizontal serifs and the round letters have vertically stressed axes which are characteristic of

CHANCERY ITALICS

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

POLIPHILUS, BEMBO, CENTAUR

SIXTEENTH CENTURY (FRENCH)

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

GARAMOND

DUTCH-ENGLISH

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

CASLON

EIGHTEENTH CENTURY

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

BODONI, BASKERVILLE

CONTEMPORARY

ABCDEFGHIJKLMNOPQRSTUVWXYZ

*abcdefghijklmnopqrstuvwxyz*

PERPETUA

Modern type designs, but has also general features that would identify it with Old Style and Old Face types. It is in general appearance similar to the lighter version of Plantin 113

#### ITALIC TYPES

Italic to-day is considered as complementary to a roman type, although the invention and use of italic has its own independent history.

Aldus Manutius, the famous Venetian printer and publisher (1450-1515), thought that an edition of Latin and Italian classics in a pocket edition would be a wise commercial venture, as small books had become popular and people wanted portable editions. His problem was, therefore, how to get the maximum amount of matter into a small volume. In the Preface of the Juvenal of 1501 he says "We have printed and are now publishing, the Satires of Juvenal and Persius in a very small format, so that they may more conveniently be held in the hand and learned by heart (not to speak of being read) by everybody."

Aldus had already used a cursive form in his Greek founts, and his italic letter was an application of the same idea applied to roman forms. The actual design of the new letter followed the current manuscript hand called Chancery, which had been adopted by the Papal Chancery in 1450. Its designer was Franciscus Bononiensis (Francesco of Bologna), surnamed Griffo. De Vinne says that the italic design was copied from Petrarch's handwriting; this idea probably arose from a misinterpretation of the statement in the colophon of an edition of Petrarch published by Aldus, where it states that the text of the edition was transcribed from a manuscript in Petrarch's handwriting.

The *Opere Volgari di Messer Francesco Petrarca*, printed in italic by Hieronimo Soncino at Fano in 1503, indicates that the italic letter was quickly copied. "It was Francesco da Bologna who conceived the new form of letters, known as cursive or cancellloresque (*cancellaresca*), of which none of those who wish to trick themselves out in borrowed plumes is

## REVIEW OF ROMAN TYPES

VENETIAN.	1470	(Nicolas Jenson)	Venezia
		„	Centaur
OLD FACE	1495	(Aldus Manutius)	Bembo
	1499	„	Poliphilus
	1532	(Robert Estienne)	Estienne
	1561	(Christopher Plantin)	Plantin
	1582	(Jean Poupy)	Granjon
	1615	(Jean Jannon)	Garamond
	1650	(Christoffel Van Dyck)	Van Dyck
	1720	(William Caslon)	Caslon
	1745	(P S Fournier)	Fournier
	1761	(John Baskerville)	Baskerville
MODERN *	1765	(Giambattista Bodoni)	Bodoni
	1789	(John Bell)	Bell
	1812	(Miller & Richard)	Scotch
	1815	(Justus Walbaum)	Walbaum
OLD STYLE	1850	(Miller & Richard)	Old Style
	1912	(Gerard Meynell)	Imprint
	1932	( <i>The Times</i> )	New Roman

the author, but assuredly the said Francesco, who invented and designed them, indeed he designed all the types of which Aldus has at any time made use, as also that in which this book is printed "

In Aldus's italic the mechanical difficulties were evaded by giving the letters the slightest possible inclination and by making logotypes of letters which interfered with each other (of which there were no fewer than sixty) He also used upright capitals of small size (small caps) instead of full-sized italic capitals, which were introduced in France some time later.

"The calligraphic deficiencies of the Aldine italic," says Mr. Stanley Morison, "are only too apparent when it is placed side by side with that invented in Rome by . . . Ludovico Arrighi *alias* Vicentino . . . It is not only a more graceful letter than Aldus's and more eligible, but it is more permanent in its influence. There is no doubt, I think, that we owe the form of italic which we employ as a companion to our Old Faces rather to Arrighi than to Aldus."

Italic is an informal and sometimes very graceful letter, and is used to-day for emphasising words in text, indicating foreign words and titles of books, for lending contrast and variety in display, and sometimes for the preface of a book (probably to preserve analogously an epistolary atmosphere).

There are many beautiful alternative capital letters in some italic founts known as "swash" letters, which give a pleasing calligraphic and decorative effect when judiciously employed. They are best used initially and finally, as they are apt to appear ridiculous when used medially

The availability to-day of that kind of cursive letter design called Chancery on which the first italic was based now affords opportunity to the typographer of setting long passages or even whole books (of poems, for example) in this pleasing design. Of these types are Blado (the companion italic to the Poliphilus type), Arrighi (now generally called Centaur italic), Bembo italic, and Lutetia italic

Most roman founts to-day are supplied with a complementary italic, and a selection of these designs is shown



A B C D E F G  
H I J K L M N  
O P Q R S T U  
V W X Y Z  
a b c d e f g h i j  
k l m n o p q r  
s t u v w x y z  
2 3 4 5 6 7 8 9

FIG 17—EDWARD JOHNSTON'S SANSERIF

## SANSERIF TYPES

The sanserif or gothic (as it is sometimes miscalled) is a comparatively modern creation. It was first introduced at the beginning of the nineteenth century. It may owe something to the ancient inscriptions of the Greeks, and this has possibly led some typefounders to call it "doric" after the simplest of the Greek orders of architecture. Until quite recently the design possessed little aesthetic value, but in Edward Johnston's design for the Underground Railway (1919), where the forms of the letters have been made to conform to the proportions of the early roman epigraphic letters (such as the Trajan Column), and in the letter designed by Eric Gill for the Monotype Corporation in 1928, it makes a pleasing and nicely balanced capital alphabet. The lower-case is probably a little less easy to read than an average Old Face type because of the similarity of i, l, and I (notice the word "Illusion") and the lowercase e and c. The rounded lowercase l which is seen sometimes in the Underground announcements seems quite foreign to the fount, although the gain in legibility is considerable.

The lowercase of Gill Sans is eminently legible for a letter of this kind and generally easier to read than other sanserif designs. This is in a large measure due to the fact that the strokes of the letters are not of monotone thickness, that the letters are in effect roman letters without serifs. The retention of the normal roman forms of a and g also adds to its pleasantness in reading for long periods. The gradual familiarisation of the reading public with the lowercase sanserif letters is now overcoming its objection for use in books. In a recent series of language books there seems no violent sense of being impeded in fairly long paragraphs of reading matter set in Gill Sans.

There are two groups of sanserif types to-day. The first group consists of those designs of monotone line which have diminutive serifs and which are used for certain kinds of stationery printing, these are called Lining Gothic and are available in several widths and weights of capitals only. Heavier versions of sanserif designs (such as those which

GILL SANS

A B C D E F G H I J

K L M N O P R S T

U V W X Y Z

a b c d e f g h i j k l m

n o p q r s t u v w

x y z

1 2 3 4 5 6 7 8 9 0

follow the form of their nineteenth-century prototypes) are in little use and have been supplanted by bolder versions of such designs as Gill Sans.

Sanserif designs are generally manufactured in various weights and in both normal and condensed versions. Gill Sans and similar designs have a wide number of members in the type family, and have begun to take the position which was held half a century ago by the well-known Cheltenham family.

#### DISPLAY TYPES

Display types, or *caractères de fantaisie* (as they are aptly called in France), occupy a large part of the equipment of the modern printer, although they were unknown to the early printers. It is estimated that about 90 per cent. of contemporary printing falls under what is called "jobbing" or "display."

Generally speaking, any type design, whatever its origin, may be regarded as being a display type or a type which may be used for display when it is larger than 14-point. Competitive adjacent advertisements have given rise to the use of blacker and bolder versions of popular text types, so that the normal design and its bold version may be employed together without any violent sense of discord. Many display types have therefore been evolved by emboldening an existing text type, and very many text types have their complementary bold versions.

Among these are Cloister Bold, Caslon Bold, Bodoni Bold, Bodoni Poster (an extra bold), Plantin Heavy, Baskerville Bold, Goudy Bold, Goudy Heavy, Perpetua Bold, Gill Bold, Gill Extra Bold, all of which are emboldenings of designs previously discussed in these pages.

There are also designs which have been revived on the lines of those used by French engravers of the eighteenth century. This century saw the rise of many decorated and shaded letter forms which were evolved for the captions and title-pages of books of engraved plates by Boucher, Cochin, Moreau-le-Jeune, Gravelot, and others whose designs were

DECORATED TYPES

IMPRINT SHADOW

*JUNE*

TITLING OPEN

OLD DUTCH

MODERNISTIC

COLONNA

DELPHIAN

Cochin and *Cochin Italic*

executed on copper plates by le Veau, de Ghent, Simonet, and Fessard

In the middle of this century Fournier-le-Jeune began cutting decorated and shaded types and ornaments copied from these engraved letters. Some of these types have been revived, others based on the same style are also available.

Decorated and shaded letters are Moreau-le-Jeune, Fournier-le-Jeune, other decorated types are Delphian, Goudy Hand-Tooled, Imprint Shadow, Caslon Old Face Open, Narcissus, June, Naudin, Pompadour. Modern revivals of copperplate faces are Cochin and Nicolas Cochin.

The nineteenth century saw the advent of a type design with a monotone line and slab-like serifs, which was called Egyptian. This design has been recently revived in light, medium, and heavy weights, and in spite of its unsuitability as a sloped letter, in italic. Such designs often have names with Egyptian connotations, such as Cairo, Memphis, others of the group are Rockwell, Garder, Scarab, and Beton.

There are two other recent groups of designs which attempt to depart from the normal appearance of the type character on the paper: reversed letters or white letters on a black background, and three-dimensional or cast-shadow designs. Gill Cameo represents the first group and Rockwell Shadow the second. There are many others available of both kinds.

Another form of letter that enjoys a wide popularity to-day is script. In general, the division between italic and script is that script is less formal although the letters are sometimes unjoined.

Scripts may be divided into those which are joined and those which are unjoined. In the first category are (a) copperplate, such as Marina, Palace, and Parisian, (b) less formal copperplates with contrasted strokes, such as Ariston, Glenmoy, Mandate, and Script Bold; (c) monoline scripts, such as Kaufmann, Penflow, Pentape, Script Monoline, and Signal. Of the unjoined scripts, there are (a) formal scripts, such as Dorchester, Grosvenor, Mayfair, Raleigh, Sketch, and Trafton, (b) less formal scripts with contrasted strokes,

ROCKWELL

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

**ABCDEFGHIJKLMNOPQRSTUVWXYZ**

**abcdefghijklmnopqrstuvwxyz**

ROCKWELL SHADOW

**A B C D E F G H I J K L M N**  
**O P Q R S T U V W X Y Z**

GILL CAMEO

**A B C D E F G H I J K L M N O P**  
**Q R S T U V W X Y Z**

GILL CAMEO RULED

**A B C D E F G H I J K L**

such as Allegro, Amanda, Caprice, Coronet, Grayda, Hauser, Holla, Legend, and Temple, (c) monoline scripts, such as Flex, Gillies Gothic, Gladiola, and Romany

Some of the many varieties of these scripts are illustrated.

#### ILLUSTRATION

There are many reasons why it is desirable for type settings to be accompanied by illustrations. Pictures are often a readier manner of communicating certain ideas than words. Although DANGER painted on a board makes an effective warning to pedestrians, more subtle presentations of ideas, such as the difference in quality, style, and appearance between one manufactured article and another, are often presented more quickly and more dramatically by means of illustration. A picture can describe, inform, and explain more quickly than words. In advertising it can attract attention and also associate or identify, and so link up with the actual article.

The importance of a knowledge of the reproduction processes in the publishing world was recently stressed by a publisher. "It always surprises me that artists as a class pay such small attention to the problems of reproduction, even when they engage upon work that is intended for use as illustration—an omission on their part which frequently seems almost wilful. The few exceptions to this rule, those artists who have gained experience of a printing office or have troubled to study the subject at all, are a pleasure to work with, and if they get what might otherwise be a disproportionate share of the work that is to be done, it is no less than they deserve."

The methods of multiplying copies of an illustration are very numerous and are determined largely by the materials used in the printing process.

This book deals principally with the letterpress method of printing, that is to say, printing from raised surfaces.

A word or two here about other methods of printing may be appreciated. Lithographic printing is dependent on the antipathy of grease and water. In direct lithography a



SCRIPTS

*Palace Script*      *Marina*

**Mandate**      **Glenmoy**

*Coronet*      **Script Bold**

*Amanda*      *Manoline*

*Dorchester Script*      *Grosvenor Script*

*Mayfair*      *Temple*

**Gillies Gothic**

drawing is made (or a transfer transferred) on a calcareous limestone with a greasy black chalk, and chemically fixed there with a weak acid solution. The surface is then rolled with greasy ink, which adheres only where the lines of the drawing appear. A print is then taken on dampened paper. Alternate treatments of the stone with ink and water allow a great number of copies to be printed. Metal plates are now used in this method, thus allowing faster printing, easy transport of plates, and less room for storage. Designs may be obtained in colours by successive printings from different plates.

Intaglio printing is effected by biting with acid into (or etching out of) a copper plate, filling the depressions with a spirituous ink, wiping all ink from the plate, and forcing the ink in the depressions on to paper by pressure. Etching, steel engravings, mezzotints, aquatints, and dry-points are all examples of intaglio printing.

Both the foregoing methods may be performed by hand, or by using the mechanical principle of photography and printing in a fast-moving press. Photo-litho employs photography to transfer the design (whether of type or pictures or both) on to the stone or plate. Photogravure (or rotogravure) as it is called when etched on a cylinder for use in a rotary machine) is a photographic method of copper engraving (intaglio). In gravure a screen is used to form a series of pits or troughs in the plate, which vary in depth according to the depth or strength of ink required. In this way rich and wide range of tone is obtainable. It is a process which is popularly used in magazines about the cinema. Lettering or text, when used with it, must be photographed or transferred to the copper plate with the pictures, type cannot be printed with the plate. The process also lends itself to beautiful colour reproductions by successive printings of primary colours and grey or black.

Letterpress methods also include those performed by hand and by machine. The earliest form of letterpress illustration in Europe is the woodcut which preceded the use of type. The earliest kinds of books were woodcuts accompanied by, and often consisting entirely of, words. It may have been

the difficulty of making corrections in a solid block of wood that led to the use of separate types. There are two forms of woodcut, each depending on the amount of wood which is cut away. As the wood would print a solid black before it is cut, it is possible to cut out lines or channels and so make an illustration which would appear as a white-line drawing on a black background. Alternatively the wood may be cut away so as to leave lines of the wood remaining and standing out to make the part of the wood which prints. Woodcuts are rarely used to-day; bold effects are more simply obtained by using linoleum or rubber (which is cheaper, cuts more easily, and uses less ink in printing)

A wood engraving differs from a woodcut in that it is engraved on the end grain of hard wood with a graver; a woodcut is made on the plank by cutting with a knife. Wood engraving was introduced by Thomas Bewick (1753-1828), and was used for most kinds of illustration until the introduction of photographic methods. It is still practised and used for certain kinds of book illustration notably by the private presses.

In advertising, wood-engraved effects are now produced by means of scraper board. Indian ink is applied and scraped away with a knife to form the lines of the drawing. Scraper boards are obtainable in a variety of embossed patternings which are brought into the drawing by scraping, the parts left untouched are not registered by the camera. Scraper-board drawings are reproduced by photo-mechanical line engraving.

In the photo-mechanical line engraving process, for which only drawings which have the same strength of colour throughout, and not shades of it, are necessary, a photographic plate is made of the drawing in the required size. This negative is then coated with rubber cement, cut, and soaked in acetic acid, and then stripped off the glass. This film is then placed on  $\frac{1}{4}$ -inch plate glass with others and placed in a printing frame against the face of a piece of zinc which has been sensitised with an albumen. Powerful arc lamps print the negative on the zinc. The zinc plate is then

rolled with special ink and rinsed with water. Where the negative was transparent the light renders the albumen coating insoluble, and it remains on the zinc as an acid-resist, the rest of the zinc is left bare. The rest of the process consists in etching away the parts not required to print and so leaving the lines of the drawing standing up.

It is possible to add various kinds of tints to line engravings. Hundreds of patterns are available, and as many as desired may be added to the same engraving. The portions to be tinted are left in white on the original drawing and the tint required indicated on an overlaying tissue. The tint is laid on the zinc plate immediately before it is etched. The parts not affected by the tint are protected by painting out with gum. The tint-laying celluloid is inked with lithographic ink, and the tint transferred to the zinc by pressure with a roller. The gum is then washed off, and the process repeated as necessary.

For illustrations where there are tones or shades of colours, such as wash drawings and photographs, the photo-mechanical half-tone method is used. A half-tone plate consists of a series of equally spaced dots, which are very minute in the highlights and which gradually increase to solid dots in the dark tones. The tops of these dots get wider as the screen gets coarser. For this reason the coarse half-tone can be printed on a paper with a fairly rough surface, because the ink will not fill up the spaces between the dots. The dots are produced by a screen which consists of two sheets of glass ruled with parallel lines etched into the glass. These two sheets are sealed together with the parallel lines at right angles. The screen is placed in front of the photographic plate and breaks up the subject into small squares, which, when the plate is reversed in the etching process on the copper, appear as dots. To obtain high-light effects the smaller dots can be reduced by re-etching and the larger dots burnished to make them larger. In the making of half-tone engravings in colour, a block is made for each colour. The work is produced by printing the blocks successively over each other in their respective colours.

Good results by the half-tone process depend not only on

the size of the dots but on their shapes, and unless the impressions are perfect and quite free from slurring, the results will be unsatisfactory. For this kind of printing a paper with a special kind of surface is required. The half-tone blocks with coarser screens can be printed satisfactorily on a surface that has been burnished (calendered), the finer screens require a surface that has been applied to the paper after it is made; these papers are called art papers.

Experiments have been made, by deeply etching the blocks, to overcome the need for art papers. These blocks require a greater pressure in printing than ordinary half-tones, but no special machine is needed.

When ordering a block, it is important that all the necessary details are given to the process engraver. First of all, the exact size to which the block is to be made and, if the original photograph or drawing is not in the same proportion, what part of it is to be included. The photograph used should be on a suitable print (either a contrasty matt surface bromide or a purple-toned P.O.P.) and which will require only the minimum amount of retouching. It is better if the original is a little larger than the size to which the block is to be made. Drawings should be done in dead black waterproof ink on white Bristol board. A reducing glass is a valuable accessory to the typographer.

Original drawings and photographs should be kept perfectly clean, without finger marks, scratches, or scarifications. The cost of making blocks may be reduced if several subjects are placed together and photographed and etched together. In this case the reduction must, of course, be to the same degree. Other points worth noting are that zinc may be used instead of copper if the screen is coarse, and that vignettes, ovals, circles, and other special shapes and finishes are dearer than ordinary squared-up blocks.

The particulars which should be given to the engraver when ordering a block are the size (width or depth—not both); the screen, if a half-tone. (A rough guide is 60–85 for newspaper, 85–100 for machine-finished papers, 120–133 for imitation art papers, 135–200 for coated papers). If there is

any retouching to be done, full details should be given. The finish should be stated, whether squared-up, vignetted, routed, with oval or line finish; finally, when delivery is required.

Original blocks should not, unless the run is very small, be used to print from. Electrotypes or stereotypes should be made from the original block, which should then be filed away for future use. Stereos from fine half-tones are not advised, but when made from suitable originals may be nickel-faced, which will add from 25 per cent more to their wearing qualities.

As a guide to the duplicating of blocks, screens from 45 to 85 will stereotype well, all blocks with screens up to and including 133 will make good electrotypes; blocks over 133 and up to 150, if electrotyped, should be lead-moulded. Blocks with higher screens than 150 should not be electrotyped; if duplicates are required, original etched blocks should be made.

X With regard to the endurance of blocks, half-tones will be serviceable for from 50,000 to 100,000 impressions, electrotypes and stereotypes from half-tones up to 75,000 and 60,000 respectively; original line-blocks up to 200,000, electrotypes and stereotypes from line blocks up to 175,000 and 125,000 respectively. These figures will vary according to the surface of the paper used and the care with which the make-ready is performed.

A stereotype is a cast in metal taken by means of moulds of plaster of paris and papier mâché from type and/or plates. Papier mâché moulds are called matrices ("mats"), and are a convenient form for despatching duplicate advertisements for newspapers.

An electrotype is a shell of copper backed by metal. A wax mould is first made of the type and/or plates, and copper is deposited electrolytically on the surface of the mould, the shell so formed is peeled off the wax and filled with type metal. The back is then planed and the metal mounted to type height.

Type, and engravings in wood, line, and half-tone, are

duplicated for several reasons. It may be advisable to avoid wear on a block by printing from it. The type surface may need to be duplicated to obviate the cost of duplicate type-settings; as many as four or even more type surfaces may be required so as to print more than one copy at a time and reduce the cost of long runs on the printing machine. This procedure is often adopted when very large editions are required. An advertisement may need to be inserted in several journals or newspapers on the same day, in this case the stereotype "mat" is a convenient form in which to send duplicates. Whole formes of type and blocks may be needed for several rotary presses for printing editions with slight variations or of the same matter. In this case, several curved stereotypes are cast and clamped on the cylinders of the presses, with or without the slight alterations required.

## CHAPTER TWO

### ARRANGEMENT

DESIGN is the inventive arrangement of lines and masses in such relation to each other that they form a pleasing unity of effect—a unity towards which each part contributes. The function of design is to provide forms which will allow the maximum scope in expression for the ideas to be expressed, and is the deliberate selection of material and its orderly arrangement

Design is always creative because it must always determine its own proportion of values in relation to each other in each part of the design, and to its fitness for the purpose of the design. It is limited only by the laws of form and the capability of the material used for its interpretation.

Creative design does not mean creating something out of nothing, but of a fresh form to solve a new presentation of a new point of view. The elements in an original design may all have been used many times and they may be merely a re-arrangement of old forms, but it will still be an original design in its unity and completeness.

Printing performs a necessary service. It communicates messages and information. If its usefulness perfectly performs its purpose, it will generally be pleasing. This pleasantness may, of course, be merely accidental. If a work is good in itself, if the workmanship is honest and efficient, if the workman has produced a thing that does its job, it will be pleasant to use.

Design is the principal element in creative work; good lettering and draughtsmanship are merely the means of its expression. Everything is subordinate to the design, other things serve to help its adequate statement. For this reason it is impossible to judge from a finished piece of printing whether the draughtsmanship of the original design was well



or poorly executed, but only whether the design was successfully planned

In selecting the media for the expression of a printed message, the printer is more or less limited, firstly, by the material furnished by the copywriter and illustrator (called "the copy" in both cases), and, secondly, by the means by which his designs are reproduced. His work consists, therefore, in the reconciliation of these factors in order to produce an attractive and convincing presentation.

Words are often arbitrary in meaning, and their force often depends on their position in the sentence, they affect or are affected by other words which precede or follow them. The bearing of a message may be vitiated by unthoughtful arrangement. Words arranged to follow the lines of a specific design, squeezed or expanded into a pattern, spaced out to fit a pre-determined area, made to run around corners, will almost certainly obscure the natural presentation of the content. However beautiful the pattern is, it will fail as a method of expressing thought because the words are made subservient (Fig. 18)

In bookwork the design of the title-page and the preliminaries compose the whole work. Most printed work to-day which requires versatility from the designer is of an advertising nature. But it must never be forgotten in the search for new means of expression that the designer's primary task is to sell the goods, an object which can only be achieved if the words can be read.

#### THE PRINCIPLES OF DESIGN

The principles governing design in typography are enunciated in the pages which follow, and the application of them should give elasticity to the designer's style and stimulate his invention. These principles cannot invariably be applied, every rule may be intelligently and deliberately broken by a master of his craft because he knows the principles underlying the rules. There is no typographical design to which every rule applies, at the same time there is no design to which some of the rules cannot be applied. Once the student

understands what is being sacrificed by the breaking of a rule, he may break it if he is prepared to accept that sacrifice to secure a particular effect

"A thoughtful study of the history of design," says Batchelder, "would seem to indicate the futility of trying to teach designing through a paper produced on a basis of theoretic knowledge or book-learned information as to tools, materials, and processes. We may hope to define elementary principles on paper, to appreciate and express an abstract beauty of line, form, and tone, to stimulate, in some measure, the imagination, to learn the value of clear and orderly thought; but if we wish to go beyond this abstract expression, let it be on a basis of practical experience in constructive work."

#### HARMONY

Harmony is a unity with which all the component parts are in complete accord. This unity must satisfy the eye so that it is felt to be complete, and it will generally be secured by avoiding blatant differences or oppositions, whether of style, shape, colour, or tone.

The characteristics of any definite style in art or craft are due to a particular combination of elements which are used consistently by a certain civilisation, historic period, race or nation. These particular combinations give the whole keynote to any definite style. Thus the arabesque pattern which denotes Moorish origin, the ball-flower moulding of Decorated English Gothic, the neo-classical mode of Sir Christopher Wren, the Elizabethan ruff and doublet, the deliberate lack of perspective in Chinese art, are all characteristic notes which serve to mark a distinctive style.

These distinctive styles should not be mixed in the same work. The printer has unfortunately an unlimited amount of typographic material and the indiscriminate mixture of various styles is a common violation of good taste and harmony. An understanding of the various styles is of great value to the typographer and designer for printing of certain kinds, as it helps him not only to avoid haphazard mixture

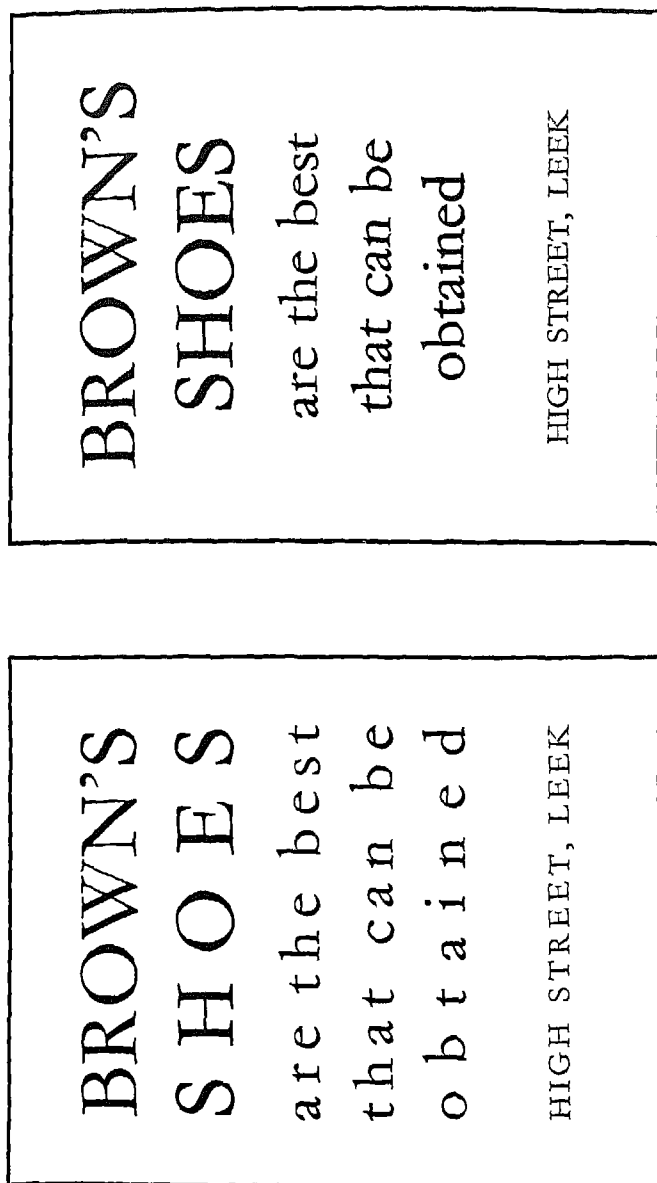


FIG 18—DISPLAY LINES SPACED OUT ARTIFICIALLY TO FILL MEASURE, AND ALLOWED TO FALL NATURALLY

of styles but also to plan work which demands a period style, and to use a style which reflects a period rather than merely copies its accents.

The study of the work of the early printers will be of inestimable value in this connection, but of more value, as M<sup>r</sup> Morison says in the introduction to *The Art of the Printer*, "as an inspiration towards the conception of new solutions of the essential problem of typographical style, to achieve within what has necessarily become a narrow convention an individual and personal treatment." He here rightly insists that "the practising typographer will achieve a similar standard of taste and discrimination if he will study the pages of those printers whose talent and opportunity for its exercise enabled them to produce books which exhibited the fundamental characteristics of all fine printing, namely a certain clear rationality and conviction in their arrangement."

Harmony of tone may be secured by the use of tones which have some common quality, or by varying the quantities of tones used. This does not prevent the use of contrasting tones, but the oppositions must never be too violent.

The subtle variations of tone in the elements which make up a design also require careful judgement and consideration to obtain that pleasing blend of contrast which gives attractiveness and effectiveness to its general appearance, and also secure correct emphasis to each part according to its importance. These contrasts of tone should not be strong enough to upset the balance of the design. The border or decorative elements must combine pleasingly with the type (Fig. 19), similarly, the type face should be chosen to suit the tone values of the illustrations.

Every type face has its own colour value, and tone harmony consists mainly in balancing these various depths of tone. A pleasing variety of tone, correctly balanced, is as essential as a balance of black and white or of proportional areas. The tone depth of a type face can also be deliberately used to emphasise parts of a design so that there is a "first-glance" reading of the main display and a "second reading", then the reader really begins to read all the subject-matter.



FIG 19—BORDER AND TYPE IN HARMONY

In advertising matter the purpose is to turn the spectator into a reader and the reader into a buyer. The whole look of a design can suggest delicacy (Fig. 20), whether the printed piece be an advertisement for a toilet soap, a brochure on eiderdowns, or a slim volume of pastoral verse.

The appearance of a type face in page or paragraph form may vary according to the manner in which it is spaced. Streams of white space or "rivers" through the mass will give it a patchy appearance. Leading also reduces the mass weight of type. A decorative headband or initial which harmonises admirably with a page when it is set solid may be far too heavy when the same type is led. Some types, again, look better when generously led. The amount of leading will depend to some extent on the margins of the page, where they are narrow, extreme leading should be avoided, as paragraphs which have not plenty of white around them look ineffective if led too generously. The foregoing remarks apply only to leading considered from the view of tone value; other aspects on the use of leading as a corrective to too long a line have already been considered.

#### SHAPE HARMONY

To preserve unity between shapes in a design, the use of shapes which are related is essential. The contour of the masses, illustrations, panels, and often the shape of the type face, must be sympathetic and have some common property or characteristic. Condensed or expanded types, when set large enough to be distinguished as shapes, should be used only for page shapes (Fig. 21) which are condensed and expanded respectively. Masses should conform to the paper shape, and this difficulty may often be overcome by grouping the type into a contour which will harmonise with the shape of the paper.

Every shape has an individual value apart from its contrast with other shapes. The circle, because of its roundness, the direction of curve being constantly maintained and its circumference being equidistant from the centre, and the square, because of its equal sides, are more or less uninterest-



# IRISH LACE

*Ireland is celebrated  
for beautiful lace, and justly so. And of all  
the Irish lace, none is more beautiful than  
that from Limerick. You are invited to  
inspect the wide stocks of exquisite work  
which are now exhibited  
at our store*

THE IRISH LACE GUILD  
DUBLIN

FIG 20—TYPOGRAPHY IN HARMONY WITH SUBJECT

# BOOK MARK

*If you really  
enjoyed this  
book, why not  
ask us to send  
our list of new  
books as they  
are issued and  
added to our  
catalogues?*

**BROWN'S  
LIBR**

# CLIPS

FIG 21—CONDENSED AND EXPANDED  
TYPES USED ON AREAS WHICH ARE  
SYMPATHETIC IN SHAPE



ing shapes Both the ellipse and the oval are more pleasing than the circle as shapes because the curve directions are varied The oblong and triangle, again, are further and more interesting variations of the square The beauty of the oval has been largely used by the potter in every age because of its pleasing contour, and subtle variations of the oblong and triangle may be studied in almost every good example of architecture. A clever use of the contrast of the curve and the rectangle as the basis of composition in a picture may be noticed in *Love and Death*, by G. F. Watts, in the Tate Gallery, London, where it will be seen that the rigidity and finality of Death is symbolised by the right angle formed by the outstretched arm and body, and that the curved line formed by the right side of the arm, body, and the leg of the boy Love effectively contrasts with the right angle, and so symbolises the grace and sensuousness of love.

The use of varying shapes which contrast with one another, therefore, will give interest and variety to a design, and if the proportions are also pleasing, the maximum effect from the point of view of the distribution of the masses will have been gained. When a mass has an unusual shape, it should not be heavier than its surroundings, because of the heightened contrast given by its unusual shape. If the page shape is nearly square, the arrangement of the masses may be disposed to give depth to the page (Fig. 23) by the use of two columns which because of their shape lengthen the effect of the page as a whole. In Fig. 22 the wideness tends to maintain the squareness of the page. This squareness is further accentuated by the side-notes. This is probably due to the fact that the eye is more accustomed to move laterally than vertically, and consequently vertical distance seems longer to the eye. If the verticality of the shapes is emphasised by the introduction of vertical lines, the effect of depth is similarly stressed.

#### COLOUR

The typographer should have some knowledge of colour combinations to use colour harmoniously. He is expected to

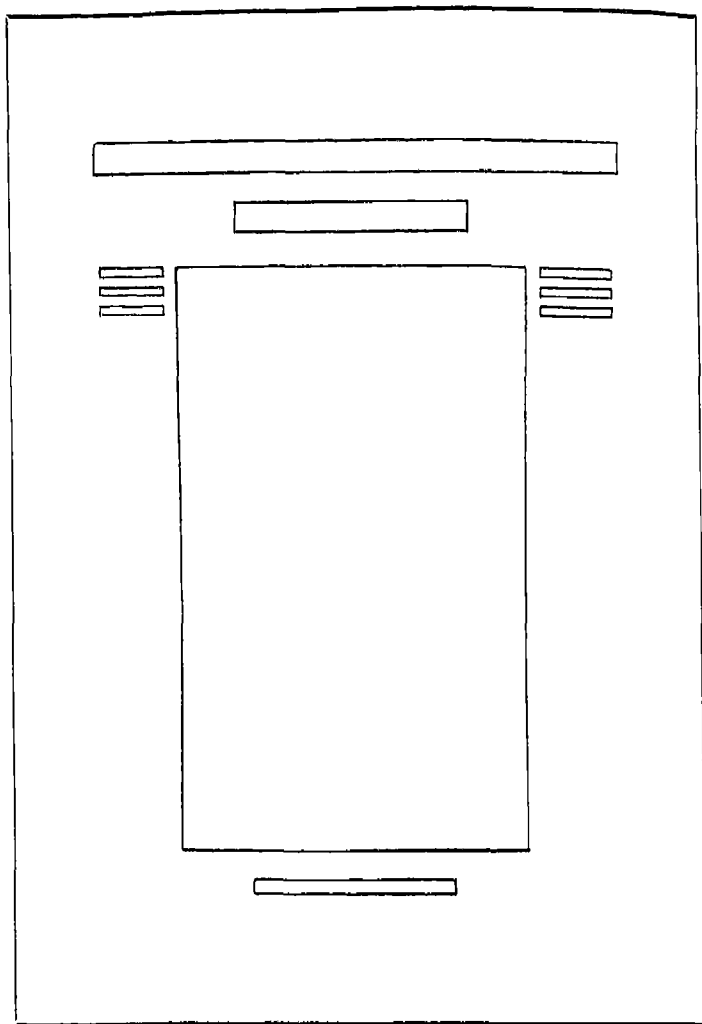


FIG 22—A PAGE SHAPE WHICH IS NEARLY SQUARE MAY BE GIVEN THE EFFECT OF GREATER DEPTH BY THE ARRANGEMENT SHOWN OPPOSITE

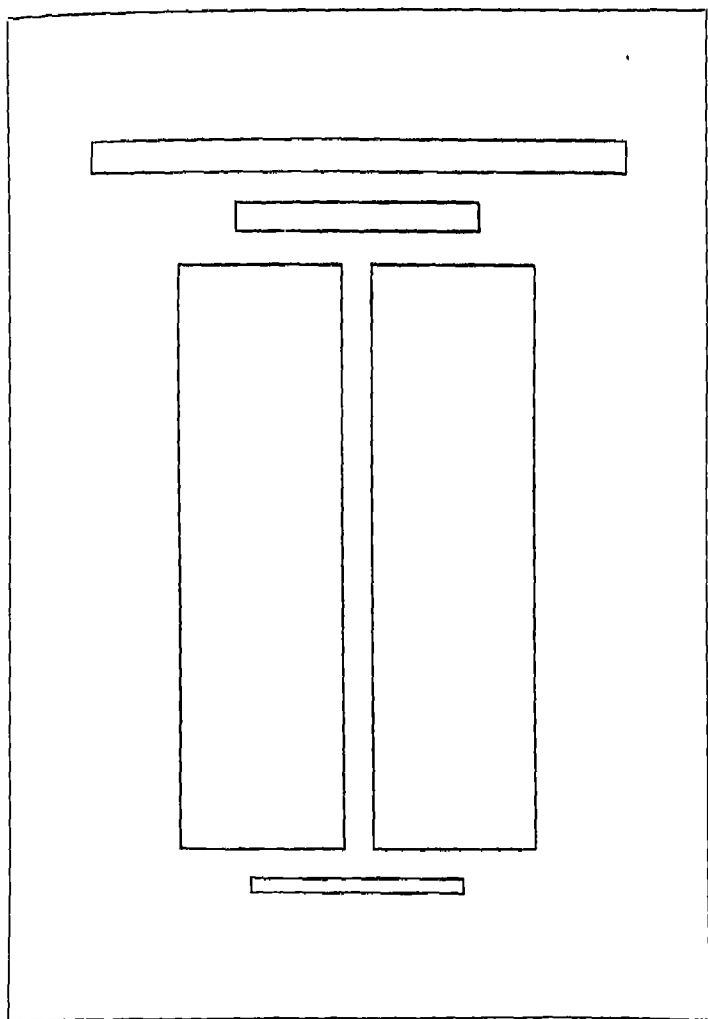


FIG 23—THE INTRODUCTION OF TWO COLUMNS GIVES LENGTH TO THE PAGE AND COUNTERACTS SQUARENESS

indicate the colour scheme he intends to use. He should also know something about the various processes by which colour work is produced, as he may be called upon to design matter requiring illustrations and to commission the artist to produce them.

The majority of colour work in printing can be divided into that which must be as permanent as possible and that which is more or less ephemeral; only in printing that will have to stand direct sunlight need the selection of the inks be a part of the planning of the work.

When a degree of permanency is desired, bright violet, bright emerald green, bright wine red, and bright blue should be avoided, as they are generally not permanent and will fade. Yellows, dark greens, browns, and red-browns are usually safe in this respect.

Colour should be as pure as possible and not muddy. In this connection the many water-colour inks now available give unique opportunity for the use of bright, clear (but flat) colours. When lines of type are to be printed in a colour that is relatively weak, they should be set proportionately larger or bolder so as to harmonise the values in the completed work. When using coloured papers and coloured inks, it should be noted that the colour of the paper will often change the colour of the ink used with it unless the ink is opaque, or the two colours may combine to form another colour which may be unsuitable.

Black is commonly employed in jobbing work in two or more colours, but it should be remembered that strong and contrasting (or harmonious) combinations of other colours can often be used with good effect, especially when there is not a great deal of reading matter; a dark blue, wine red, or green, for instance, may sometimes be used instead of black.

Colour harmony is obtained by combining shades which are different in tone, it may also be said to exist between colours which are more or less related to each other in tone, such as cream and amber, brown and orange.

Colour contrast is secured by using a combination of colours in opposition, whether black and white, or any other

combination. There are three groups of colours: primary (which are red, blue, and yellow), secondary (which are orange, violet and green), and tertiary (olive, russet, and citrine). Complementary and contrasting colours are obtained by using one primary colour with a combination of the other two in the same group, hence red contrasts with blue + yellow (i.e. green); blue contrasts with red + yellow (i.e. orange), and yellow contrasts with blue + red (i.e. violet). These contrasts may be varied by using the primary colours with the secondary, or the secondary with the tertiary, according to the degree of contrast desired. Unless a part of the design is intended to be very strongly emphasised, it is inadvisable to use a single spot of colour only. If a decorative unit is used in a title-page, for instance, it is better to answer it by putting a line of type in colour. The best treatment in this case is possibly to print the title itself and a decorative spot or the publisher's name in colour.

Colour is a most valuable asset when used in advertising display. It arrests the eye and has unfailing powers of commanding attention. The natural colour of a product can be simulated, and so give the prospective purchaser a more vivid picture of it. Colour may also be effectively employed by harmonising the colours with the thought of the copy; reds, browns, and warm colours for gas and electric fires, blue and pink for certain feminine wares, and so on.

It is most important when colour is used as a purely decorative adjunct to a design that it should be kept in the background and not overcome the reading matter by its aggressiveness, this principle will, of course, also apply when using secondary colour schemes.

#### PROPORTION

Proportions are infinite, and their pleasing combination can be secured by the observance of one or two general principles. One part of a design must be either larger, of greater tone value, or in some way supreme over the rest. There is no proportion between equal things, there can be only symmetry. And symmetry is not design, which consists

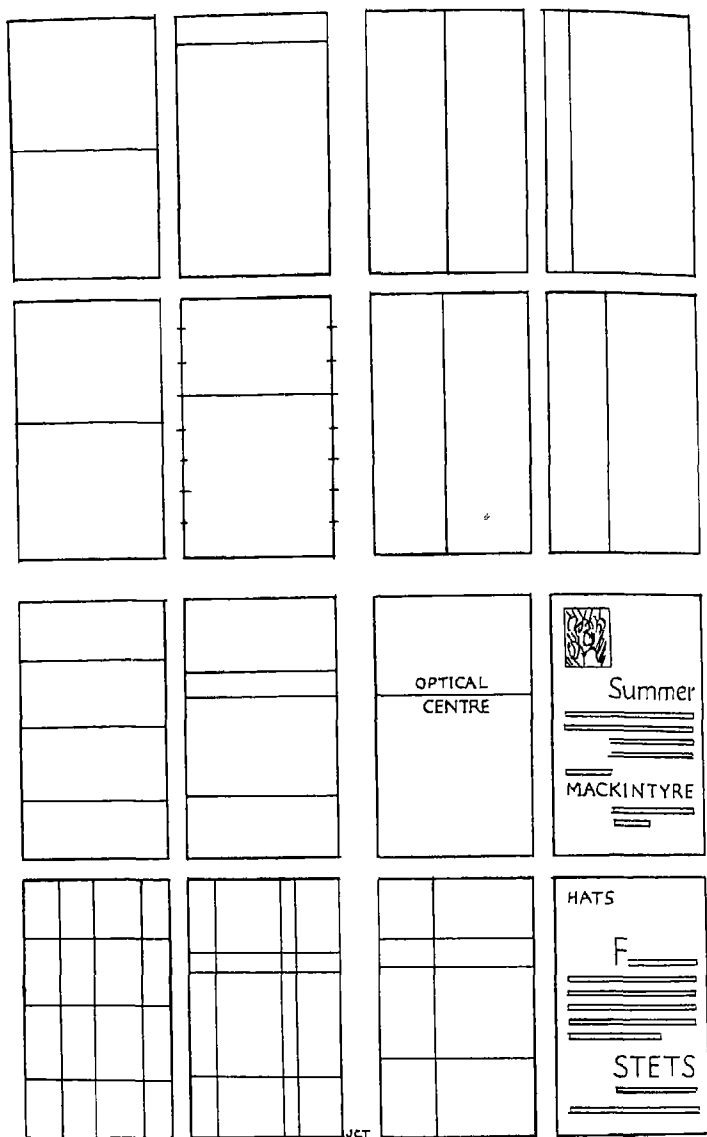


FIG 24—RELATIONSHIP OF AREAS

of the creative arrangement of dots, lines, and masses in such relation to each other that they form an agreeable whole towards which each part contributes and combines with every other part to make a unity of effect

Proportion involves inequality of parts and is the comparative relationship of various dimensions. Any succession of equal things is agreeable, but the pleasure derived from harmonious proportions is not in uniformity, but in variation and opposition bound together by reciprocal agreement. Unity with variety is interesting, with uniformity, interest ceases.

The masses of a typographical design should be distributed with a proper regard to their proportional effect, and arranged in the order which will best unfold their meaning and secure for each part its due and just emphasis and its determining influence on the other parts. The message should flow easily, unostentatiously embracing on its way a variety of minor details, which never impede its progress enough to distract the gradual crescendo of attention and interest, but by the proper use of proportion allow each part its particular and individual significance.

Equal masses and areas give a sensation of monotony and flatness, therefore the proportions of the component parts of a design should be pleasingly varied. There should be a variety of sizes and measures which harmonise agreeably because they are neither too much alike nor too radically different from each other.

This desire for variety is easily demonstrable by the most simple experiment of dividing a rectangle. Where the division is equal, a monotonous effect is given (Fig. 24, top row), where the difference is very great, the relationship is too distant, where the relationship is as 3 to 5, or 2 to 3 (second row), an agreeable contrast of areas is at once apparent. Experiments (first column) with various areas show lack of interest where the proportions are nearly equal but where the contrast is agreeable (third and fourth row, upper and lower three), satisfaction results.

One of the most important proportions with which the

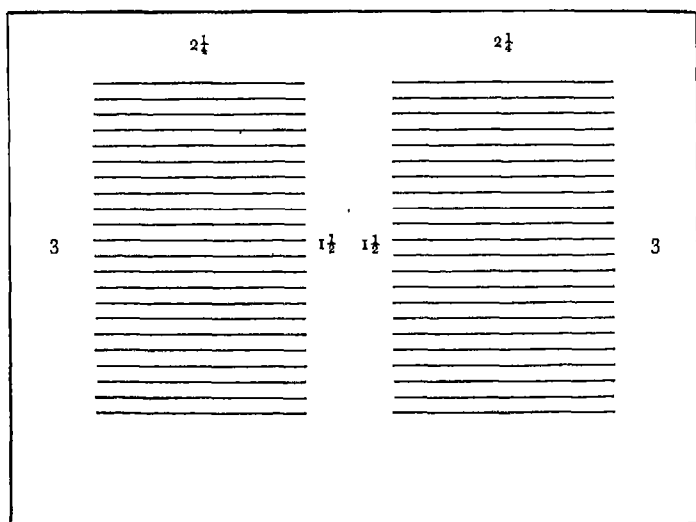
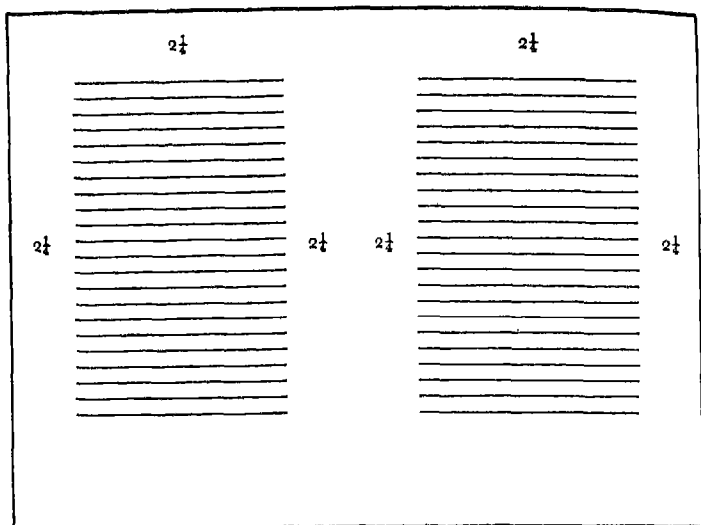


FIG 25—"THE UNIT OF A BOOK IS NOT ONE PAGE BUT A PAIR OF PAGES"



designer has to deal is the margins of the book or printed page. Incorrectly proportioned and inadequate margins often ruin the appearance of an otherwise good job. Narrow and mean margins will look cheap; overdone margins are pretentious.

In spite of the high standard which has been set by the better book printers, the marginal treatment of a great deal of commercial printing to-day still leaves much to be desired. In a large number of cases the marginal scheme is copied from some inferior existing model or practice.

It is not yet fully realised that the same standards which are used in the finely printed book can with advantage be applied to the illustrated catalogue, brochure, booklet, and newspaper advertisement.

The most successful commercial work is that which is designed on the lines of the best book standards. In the planning of a book unity must be preserved throughout, and once the margins are decided they must be strictly standardised on every page. Apart from the correct imposition of the forme, the printed sheets must also be folded correctly, an error of an eighth of an inch in the folding on one page will double the error on the adjacent pages.

In a book the actual proportions to be considered are its size and shape—proportion of width to height, the margins—to each other, to the size of the page and to the type.

The proportion of width to height is more or less decided by the standard sizes of paper. The chief problem, then, is the position of the printed matter on the paper page. In this connection William Morris says "This should always leave the inner margin the narrowest, the top somewhat wider, the outside (fore-edge) wider still, and the bottom widest of all. This rule is never departed from in mediæval books, written or printed. Modern printers systematically transgress against it; thus apparently contradicting the fact that the unit of a book is not one page but a pair of pages" (Fig. 25).

These proportions are not without logical reason. The deep foot gives the reader a place to hold the book without covering up the reading matter, the wide sides prevent the eye

running off the page, and the lesser head margin places the page in the optical centre of the paper area. It is a commonplace that a mass which is mathematically centred on a page looks actually lower than the centre.

The position of the type on the page in the early days of printing was decided by several things. The paper used was hand-made and the sheets varied in size. The pressman laid his sheets so that the top and inner margins of the page were uniform and the binder was left to trim the outer and foot margins. Another reason for the generous outer margins, it is said, was in order that the reader might annotate the text.

The proportions of a book, three hundred years old, which has extra width in the side margins for annotations are as follows: page measures  $11\frac{1}{2}$  in by 8 in. Margins: inner  $1\frac{1}{4}$  in., top  $1\frac{3}{8}$  in., side  $2\frac{1}{4}$  in., foot 3 in. If these measurements are reduced to eighths of an inch and divided by ten, the ratios are: inner 1, top 1.1, sides 2.2, foot 2.4. Mr. Johnston, in *Lettering, Writing, and Illuminating*, advocates the use of a ratio of  $1\frac{1}{2}$ , 2, 3, 4 as a basis.

Any rectangle which is constructed on the diagonal line of a paper area will be in the same proportion, and a suitably proportioned page may be determined in this way.

An attractive page-proportion may also be obtained by making the depth equal the diagonal of the square of the width. If the size of the page is 5 in. by 7 in., and the type area is  $3\frac{1}{2}$  in. by 5 in., the margins could be arranged  $\frac{1}{2}$  in.,  $\frac{3}{4}$  in., 1 in., and  $1\frac{1}{4}$  in., giving a ratio of 1,  $1\frac{1}{2}$ , 2,  $2\frac{1}{2}$ , a good standard for most work.

An advantage of this interesting proportion is that the type page can be planned to occupy half the area of the paper page, a proportion advocated by the late Mr. Jacobus of the Cliswick Press. This method also gives a related proportion to every area; the single page is half the open book, and the type is half the page area.

With illustrated pages the illustrations should be harmonised with the area of the type page. Irregularly shaped illustrations may often project into the margin and so lend a pleasing variation to the basic margins, which should be

preserved by placing the illustrations so that their masses maintain the basic margin

In illustrated catalogue work the designer often has to introduce a large number of various patterns and pictures. The pleasantness of the work will largely depend on the care given to the arrangement of the masses (whether of type or illustration), which should be harmoniously disposed with reference to the paper and page shape.

Pleasing proportions cannot be worked out mathematically, as in most other phases of design, the eye is the supreme judge. Unpleasing proportions always look clumsy and usually violate some canon of design or of good taste. This is probably the origin of the popular expression, "He has no sense of proportion." Nevertheless a set standard can be adopted as a basis and modified as necessary to suit particular instances.

#### BALANCE AND CONTRAST

The desire for balance is due to the need for a feeling of equilibrium. The eye naturally seeks for it. Seasickness is possibly due to an unusual strain on the sensory organs. The eye through the movement of the vessel, having no fixed horizontal at sea, is bewildered, with the result that the nerves are upset and react on the stomach. Children, whose sense of balance is not fully developed, are not so subject to seasickness.

Restfulness is particularly induced by large expanses of water, a sea view or a lake gives a sensation of rest and calm because of its even and level surface. This principle is involved in the disposition of masses in a design. The eye demands that there shall be an equality of forces in relation to their centre of balance. Balance in a design is therefore determined by the weight and distribution of its component parts, it may be quickly tested by half-shutting the eyes so that the details are blurred. When this is done the design should not look top-heavy or one-sided. In symmetrical designs, i.e. such that, if divided by a vertical line in the centre, the lines and masses coincide (Fig. 26), the balance

will be decided by the disposition of the weights about the centre of the page or area. If the design is not symmetrical (Fig. 27), its effect will be decided wholly by what is called formal balance. In symmetrical designs there is necessarily balance as well as equal and similar attractive forces on a line or about the central point.

Masses placed on one side or low down on the page must be counterbalanced. A thing cannot be balanced by another on top of it, though it may by one at the side of it. Balance cannot always be determined by measurement; it depends entirely upon the effect produced to the eye. The areas on each side of a central vertical line may be equal, and the design may still appear unbalanced by reason of their position.

If a line or spot is placed exactly in the centre of a rectangle, it will appear to be too low down because the eye always tends to lower the true centre. The *optical* centre is therefore not identical with the *geometrical* centre. Because of this fact there must be no preponderance of masses below the optical centre, which is a little above the geometrical centre of a page or area, or roughly about two-fifths from the top.

This principle of balance may be violated by occupying too much of the area with type or decoration; there should be a balance of black and white areas. On a book page the areas should be practically equal, that is to say, the area occupied by printed matter should not exceed one-half of the total area of the paper. In displayed pages or advertisements no hard-and-fast rule can be laid down, as the white space may be deliberately used to give contrast to type masses, and so heighten their effect, or employed to create a definite atmosphere of a certain kind.

Where a line is set in large types and centred the balance may be destroyed by the intrusion of a full point at the end of it. The full point does not count visually in the length of the line, and the line will consequently appear out of the centre. The full point should never be used at the end of a display line unless it is essential for the sense of the reading. Where display lines are followed by other display lines or matter in

a larger or smaller size, the full point is unnecessary. The difference between the type sizes is usually quite sufficient to prevent the reader reading the whole as one sentence, particularly when the lines which follow commence with a capital letter. In lines of large capitals the shape of the letters may affect the centring of the line. For instance, a word like BOVRIL will require to be placed a little to the right to counteract the effect of the space inside the L, name blocks and large display lines often need to be specially treated.

Illustrations are more likely to affect the balance of a design than any other element in it because of their superior interest power, and because they are more easily picked out as a mass by the eye. Hence if an illustration is not in the centre laterally or above the optical centre vertically, it must be balanced by some other element in the design.

If a good picture is examined, it will be found that there is usually one main feature. If this does not stand out prominently by reason of its size, colour, or position, it cannot truly be said to be a main feature. If the subordinate details of the picture are too prominent, they will of necessity tend to lessen the effect of the main feature in direct ratio to their power of attraction. "In a picture," says Henri Matisse, "every separate part will be visible and take up that position, principal and secondary, which suits it best. Everything which has no utility in the picture is for that reason harmful. A work of art implies a harmony of everything together: every superfluous detail will occupy, in the mind of the spectator, the place of some other detail which is essential." This may be applied to the printed page. If there are lines of bold type or large illustrations, they stand out according to their strength. In the picture, however, details may be indistinct or blurred and serve to direct attention by contrast to the main feature, in the printed piece every detail must secure its appropriate amount of attention, because every detail must not only be seen but read. Hence in the printed page there must be attraction of two kinds: attraction to the page as a whole and attraction to each individual part. The first kind serves to arrest attention, and the second to

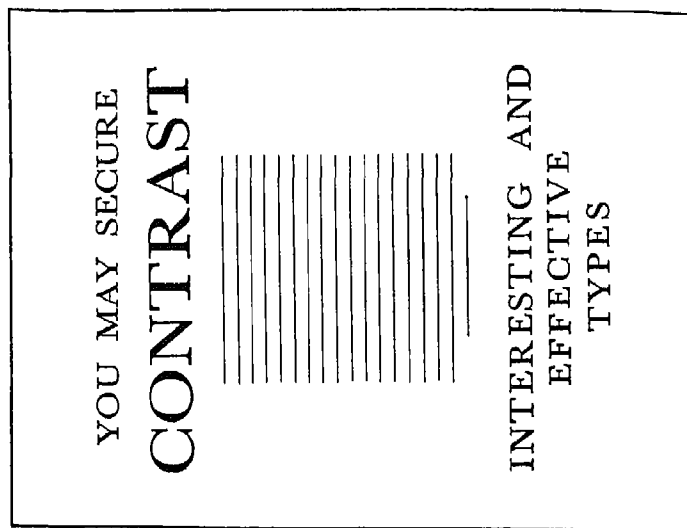


FIG 26—SYMMETRY

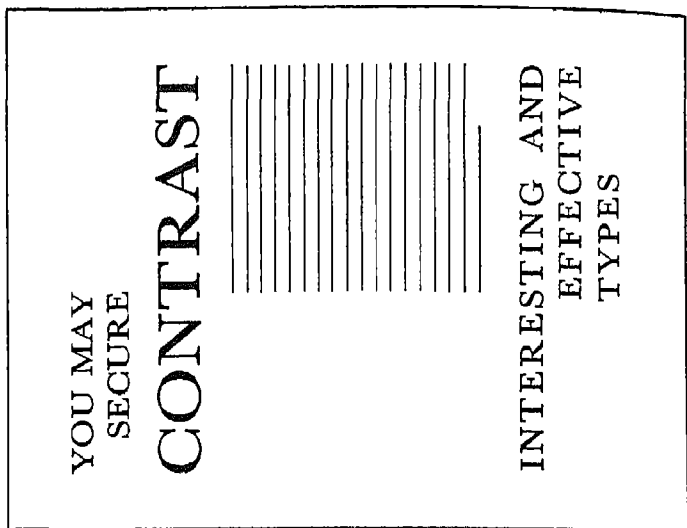


FIG 27—ASYMMETRY

maintain interest. Therefore designs in which the elements are contrasted are much more likely to foster interest than those in which this principle has been ignored (Fig. 28).

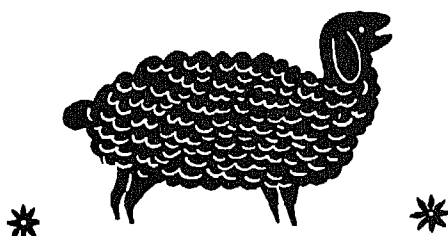
The whole purpose of display is to deliver a message with a stronger emphasis and with more variety than the use of one size of type can give. The eye demands variety, and the reader's interest depends upon it. This demand for variety is a natural human desire. A countryside is more interesting if the road winds and embraces hills and dales, a lecturer holds the attention of his audience by constant change of tone in his voice, the various changes in tempo, key, and orchestration give variety to music.

In securing this essential effect of contrast, the seasoning that gives interest to harmony, it must be remembered that every element in a design is a centre of attraction, and that too many large forces will invariably result in confusion. Neither should the same kind of attraction be used more than once in the same design.

It will be seen, then, that contrast is the difference between things that have some properties in common. It is used to cause parts of a design to stand out from other parts and depends on things that are contrasted. If the adjacent ground is white paper, anything within the area of the paper will stand out. The more the ground is contrasted with the mass within it, the greater the contrast will be. Examples of this are shown in Figs. 29 and 30. If a paragraph is set in a type face which gives a greyish background, words in heavy type will contrast with that background. Similarly, the use of italic or capitals gives a change of pattern, and consequently attracts attention. Contrast may also be heightened by combining various forms of letters such as italic, larger type, and so on (Fig. 32).

Fig. 30 shows contrast obtained by the use of various sizes of type. Contrast may be gained by the position of an element. The eye normally travels from left to right. If it is attracted by a heading at the top of a design (as in Fig. 31), the rest of the design may be arranged to make the reader travel in a pre-determined sequence. In such a case the

# ba! ba! black sheep



The black sheep of the ice cream business are Dipping Losses, Uncertain Quality, and Missing Profits. But unlike other black sheep, these black sheep don't have to be endured! A Mills Freezer in your store will chase them scampering away for once and all. We have the world's largest line of counter ice cream freezers, with a fine, low priced model to suit your requirements exactly. Write our Merchandising Department for an expert analysis of your profit opportunity—it's FREE! Mills Novelty Company, 4100 Fullerton Avenue, Chicago, Illinois

# \* write \*

FOR FREE ICE CREAM MERCHANDISING ANALYSIS

FIG. 28—CONTRAST OF ELEMENTS





*Freezer Facts*

**FREE!**

Druggists—Write Mills Novelty Co.,  
4100 Fullerton Avenue, Chicago,  
Illinois! They are the World's Largest  
Makers of Counter Ice Cream  
Freezing Equipment and, without  
obligation on your part, will immediately  
send you a magnificent portfolio  
of Freezer catalogs and literature

FIG 29—CONTRAST IN TYPE FACE

# very large type

stands out from the other parts of the design. The text matter forms a greyish background when set in the ordinary roman type faces. Those emphasized parts of the design will vary in accordance with the size of type which is used

## and a much smaller size

effects, of course, a greater emphasis. Contrast may also be gained by a differentiation in size of various main lines which can be observed in this example where three type sizes are compared. very large type, a much smaller type

## and a medium type

This, of course, demonstrates merely one aspect of contrast. Other examples will be shown later in this book which depend upon other factors such as, for example, weight of the design, change of pattern, and various other typographical devices

FIG. 30—CONTRAST IN TYPE SIZE

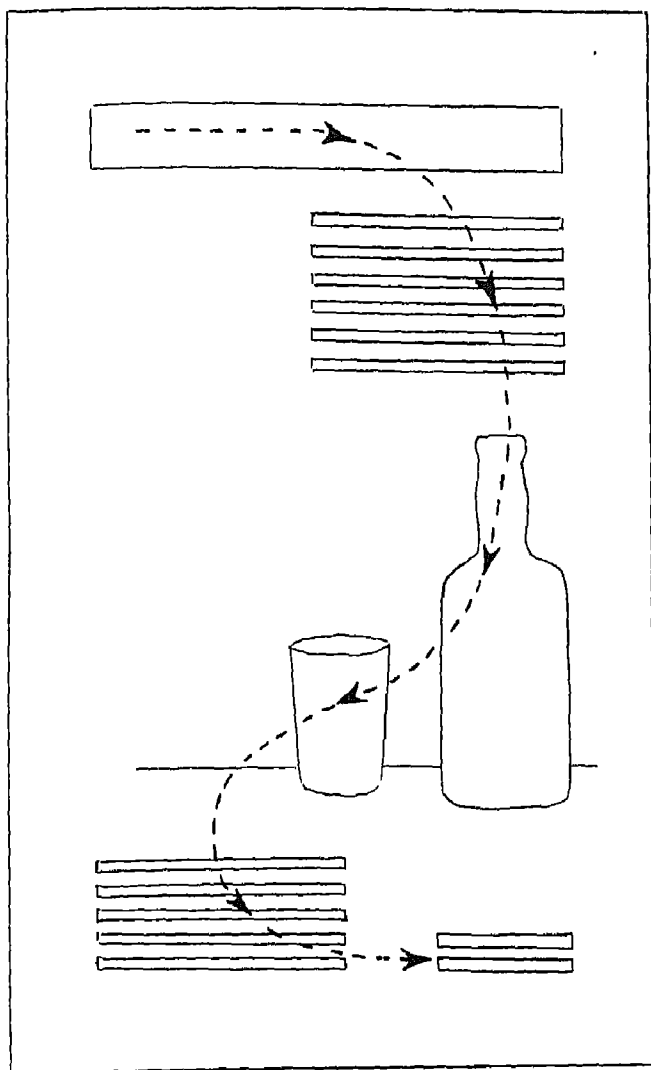


FIG 31—A DESIGN WHICH CARRIES THE READER THROUGH THE AREA  
IN A DEFINITE SEQUENCE

●	H E R E
here  <i>—and here</i>	N O W AND THEN
large  and very small sizes	GROW
THE ART OF THE BOOK  The Art of the Book <i>The Art of the Book</i> THE <i>Art</i> OF THE <i>Book</i> <i>The Art of the Book</i>	
CHANGING THE POSITION  WITHIN THE AREA	

FIG 32—EXAMPLES OF CONTRAST

elements must not be placed too far apart, or the eye will not jump across the space between. The gaps between the masses should not be greater than the width or bulk of the masses themselves if the eye is intended to travel in the direction in which they are disposed.

Prominence may be given in this way to a certain feature in the design. The best position in a rectangle is about two-thirds from the top, that is to say, a little above the optical centre. The natural desire, no doubt atavistic, of looking at a person in the eyes (which are roughly two-fifths from the top of the head) probably accounts for the reason that the most prominent position on a page or area (because the eye instinctively rests there first) is also about two-fifths from the top. In this connection masses should not be arranged so that they give the effect of dividing a design into equal halves. The main weight of the design should be above (not below) the optical centre, and the whole design planned with the proper regard to the disposition of the important parts of the matter around this dominant point.

Contrast can be secured by movement, and the attention directed to a certain point by guiding the eye to it. But this movement must be controlled. It may be given by various means, such as an arrow, a finger pointing, the direction in which a crowd is walking, by the gaze of a person in the illustration, a shoe inclined towards the price, liquid poured from a bottle, pointed gun, and so on. The movement may be directed back again to the beginning of the design, as in Fig 35. But the eye must not be misdirected or taken from any important part of the message as it is in Fig 36. The direction of the movement will affect every element along that direction, and elements not included in that direction should be arranged so that they are outside it, either before or after.


Where attention is required to be directed, but not too strongly, to some other part of the page, a panel or a display asterisk often effects the purpose satisfactorily.

With regard to obtaining contrast by position, it is important that the mass should not be overcrowded. White space has the effect of increasing the size of a mass and

*Do you drink*  
LIGHT or  
**DARK**  
beer?

FIG 33—CONTRAST OF TYPES OF THE SAME GENERIC FAMILY

NOLDE & HORST  
HOSIERY



FOR MOTHER'S DAY  
Give a box of Nolde & Horst stockings in mother's favorite color, beautifully clear, in service or sheer weights. The perfect gift because they're lasting as well as lovely!

\$0.00

DEALERS NAME

FIG 34—DIRECTION BY MOVEMENT TO BEGINNING OF THE TEXT

---

# *Every puff you take*

makes you realise that such cool and sweet smoking is not achieved accidentally. It is healthy growth, careful maturing, and experienced blending that produces such a delightful smoke. The reputation that this blend has won in a very short time shows that it appeals to a wide market. Have you tried these cigarettes?

## RAYMOND

### *Cigarettes*

TWENTY FOR A SHILLING

Plain or Cork Tipped

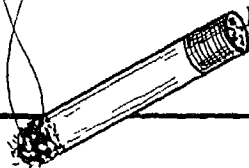


FIG. 35—TAKING THE EYE BACK TO THE HEADING



causing it, through mere contrast of black and white, to stand out and, at the same time, achieving this purpose without blatancy. A margin of space if it forms part of the design is best placed on the left, where the relief of white space attracts the reader to begin to read, a margin of the same kind on the right may not affect any purpose at all.

In the general spacing of a design the components, while not being overcrowded, should mass together as a complete unity on the area. The effect of the design may be vitiated by allowing too much looseness (See Fig. 37.)

The size of the various masses and lines enters into every aspect of contrast and is only affected by the disposal of white space. Type faces have also various characteristics which help to lend contrast. In advertising typography the value of contrast between faces of different design is important, but in certain display matter where the need for attracting attention is not so essential (as in programmes, announcements, etc.) the contrast of faces may be gained by the difference in size or difference in weight of design of the same type face (Fig. 33). There are therefore three principal methods as far as the type face is concerned: contrast by difference of size, contrast by weight of design, and contrast by difference in design. In the first instance it is merely a matter of using larger or smaller sizes of the same type face, in the second, of using lighter or bolder faces, and in the third, of combining without incongruity or mixture of style two (or rarely three) contrasting founts of different design. (See also Fig. 32.)

#### ON THE USE OF DECORATION

Throughout the ages mankind has always sought to make useful things beautiful, even when mankind was in a primitive state. Ornament has, however, no practical independent value of itself and is an accessory to, not a substitute for, the useful. This principle may be regarded as a safe guide in the application of decoration in printing. Unless the gist of the matter is made more telling by the addition of decoration, the decoration may be logically omitted. Decoration should always be part of the design, it may sometimes



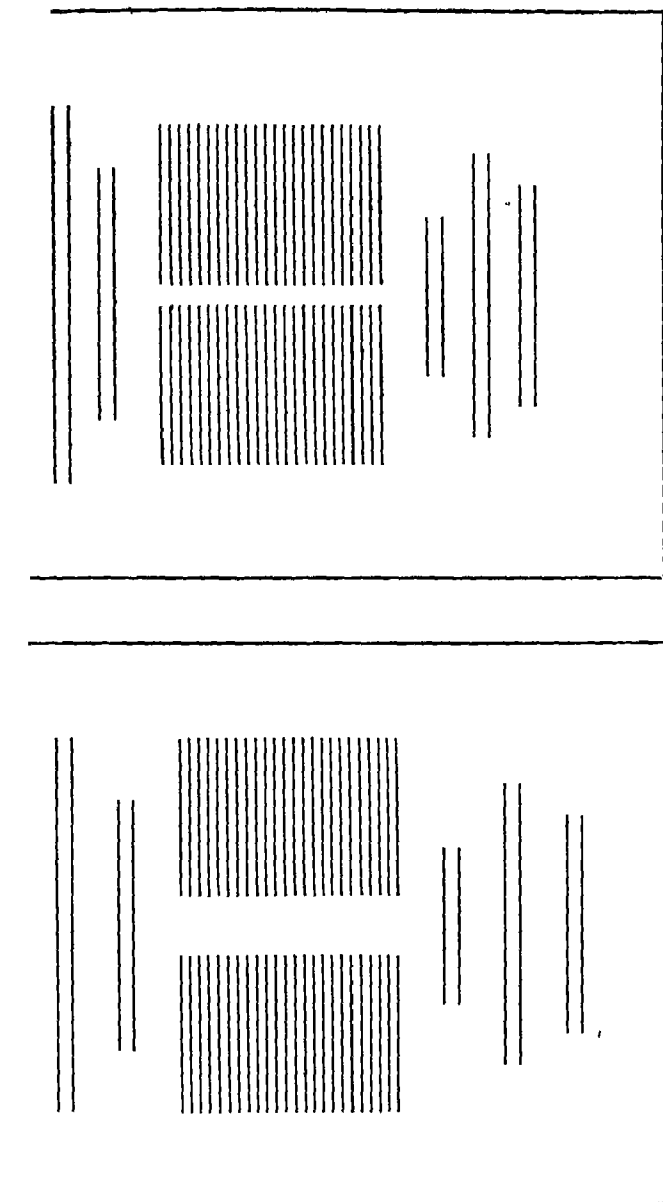


FIG 37—(A) ELEMENTS TOO SCATTERED, (B) ELEMENTS KNITTED MORE CLOSELY INTO A UNITY

increase the attractiveness of a design, but should always be subordinate. It should never be thoughtlessly constructed or added to a design, but should serve to support the constructed lines of the design or indicate a pause in the argument. Its application in other forms of design, when aptly employed, follows the line of construction. Mouldings give support to cornices, arches, and so on, capitals help to support the architraves. Wherever the line of construction is not followed, decoration degenerates into a miserable attempt to make the work look merely pretty. "Legitimate ornament," writes Herbert Read, "I conceive as something like mascara and lipstick—something applied with discretion to make more precise the outlines of an already existing beauty." Ornament must be appropriate in scale, shape, and association to the form and function of the design.

Effective use of decoration may be tested simply by deciding whether it wins attention to itself or directs attention to the subject-matter.

The purpose of a border is to surround the various elements of a design and hold them together, to unite or enclose detached masses, to catch the eye by its unbroken line and so direct attention within, eliminate outside competition, or by frequent repetition to identify a particular organisation. It serves, normally, the same purpose as a picture frame or an asylum wall, it indicates what is included within an integral whole. It should, when possible, give the design a definite enclosure. The white paper margins of a book make a satisfactory border; this virgin and unprinted portion of the page keeps the print well within the area of the book and prevents the reader's eye from being caught or arrested by colours, objects, or movements outside that area. There is, for this reason, no *practical* reason for putting a border around the title-page of a book. White paper may be made to serve the purpose of a border when the type page is almost as large as the paper itself.

The rule border is the simplest of all printed borders, and can be easily and economically composed with the various thicknesses and designs of brass rule and material produced in

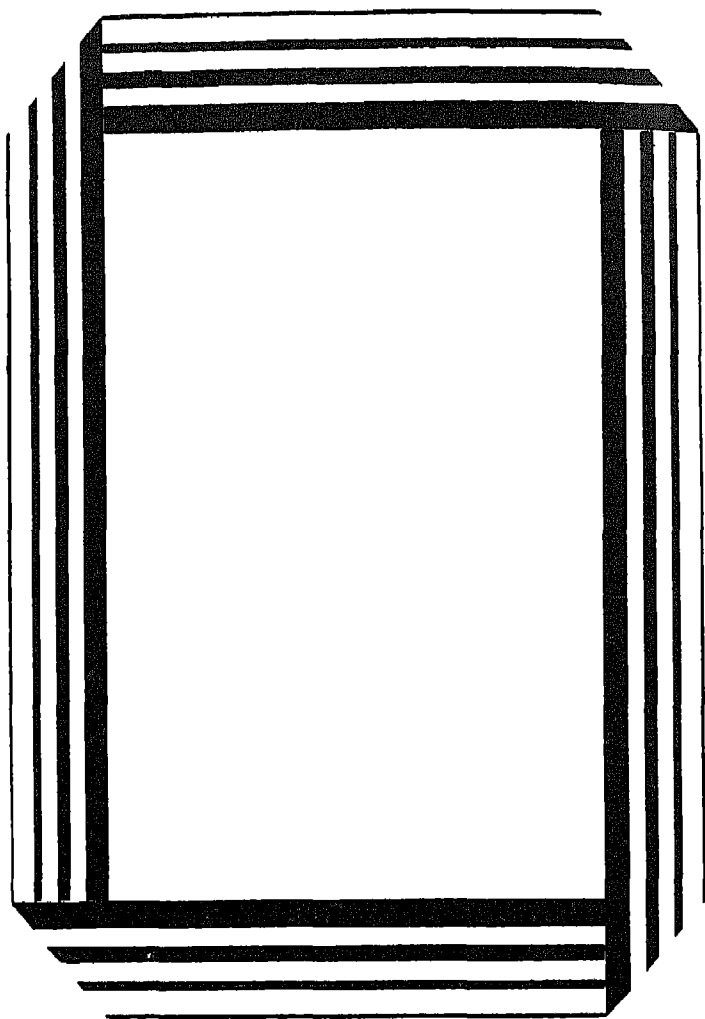
strip form by composing machines (Figs 38 and 39) It can be made up into various patterns and constructed to suit the tone value of the matter within it If its purpose is merely to separate and protect the matter from adjacent competitors and there is adequate white space within it, the border need not be either elaborate or too bold. When there is little space between the border and the type matter it surrounds, a heavier border is desirable. The border should then be composed of two or three different thicknesses of rules to avoid the depressing effect of a plain black border

In advertisement display the matter need not necessarily be completely enclosed It may be efficiently held together by a band of decoration or a rule at the head and foot, as in Fig 51, and the matter indented on each side This indentation should normally be uniform with the space between the top rule and the type matter The elements composing the type matter between the rules should be kept in well-defined and associated groups so that the border does not seem to attach itself to any isolated group and to appear to be united more closely to the border than the remainder Rule borders in this case should be made quite distinctive so that the eye has no difficulty in linking up the top and foot limitations of the advertisement

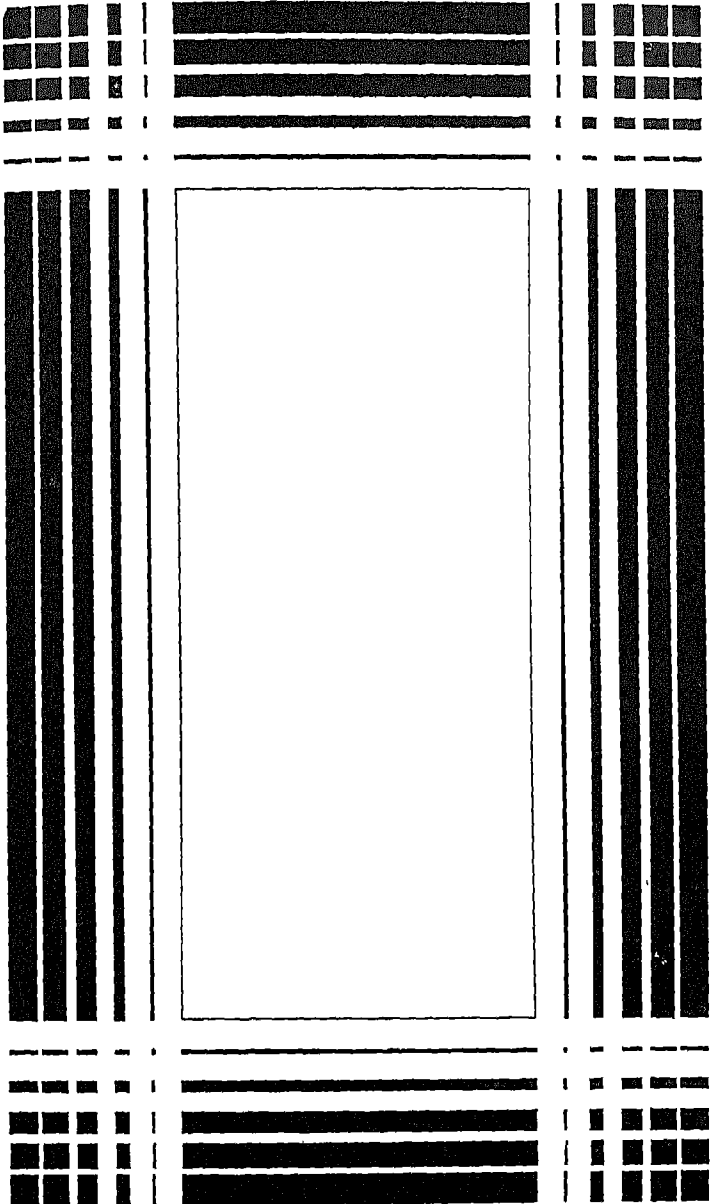
Printers' borders usually consist of separate decorative units, the position of which may generally be varied according to the effect desired Although border units have little value until they are arranged in lines and masses, the individual unit may often be used as a terminal or dividing spot

Where decoration is freely used in a design, the type should be set more boldly and to be in sufficient contrast for the decoration to be subordinate. This will generally be achieved if the masses are well grouped and the display set compactly.

Borders should be chosen which are appropriate to the type face and the nature of the work Most type foundries to-day design distinctive and special decorative material for use with certain type faces (Fig 19), and though this is a valuable deterrent to inharmonious combinations, at the same time it is apt to be a little too self-conscious and looks



FIGS 38 AND (OPPOSITE) 39—ILLUSTRATING TWO ORIGINAL PATTERNS MADE FROM  
MONOTYPE STRIP BORDERS



a little "made-to-order." The adroit typographer should be resourceful enough to devise his own typographic material without being spoon-fed, he will in this way achieve more individual work.

Both the type face and the border should, wherever practicable, be in sympathy with the subject-matter. It is not always possible to choose types which are perfectly appropriate, but it is with a little thought, a comparatively easy matter to choose both type faces and forms of arrangement (Figs 40 and 42) which do to a large extent sympathetically agree, and to avoid types and decorative elements which are obviously not in the spirit of the subject. A floral motive cannot suitably embrace an advertisement for saucepans, neither is a border which is associated with an historic period appropriate for an invitation to an exhibition of steel furniture. Flower borders seem too flamboyant for sans-serif types, and there are many geometric units which can be fittingly used.

Decoration can often be used as a kind of trade-mark and adopted for a series of advertisements in which the elements are in typographic accord and which eventually become a recognisable feature. The principle which "identifies" and gives a familiar resemblance to all the announcements of a single firm or organisation is being increasingly used, not only in decoration but in the use of a standardised type (British Railways have standardised all their publication to Gill Sans), a typographic mannerism (as in the individual lettering of Dunlop Tyre), and the absence of capital letters (in Corot advertisements) and other devices. In these instances the association becomes a slogan which is expressed typographically.

Borders of a decorative nature may be combined with rules to obtain many interesting effects, and often a rule gives a support to a decorative border which by itself may be a little too light in tone.

Many pleasing decorative schemes may be planned with the use of flower borders, or *fleurons*. The apt use of these old flower units does not tire, even when the pattern is endlessly



repeated either in mass or in combination with initials and type. They seldom intrude, because they always seem to be a natural part of the typographical *mise-en-scène*. They are naturally typographic and harmonise pleasingly and appropriately with both Old Style and Old Face types in the same way that the woodcut borders of Ratdolt and the early Venetian printers harmonised with their heavier roman types. Many designs can be built up with the same units by varying the order of their position, they may be set to any area, width, or depth, and they can be employed as a complete decorative motif in a book or magazine, as headpieces, tail-pieces, and formers to factotum initials.

A common error in the use of borders is the amount of space which is allotted for the inside and outside margins. Before these are decided the area on which the type is to be printed must be known. In newspapers there are no outer margins, and the border must indicate plainly by its individuality and strength the boundaries. The margin between

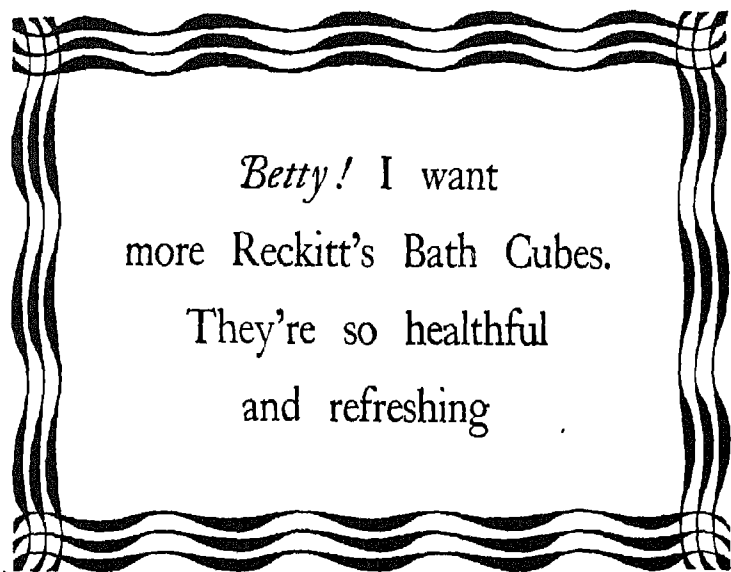


FIG 40—APPROPRIATE DECORATION

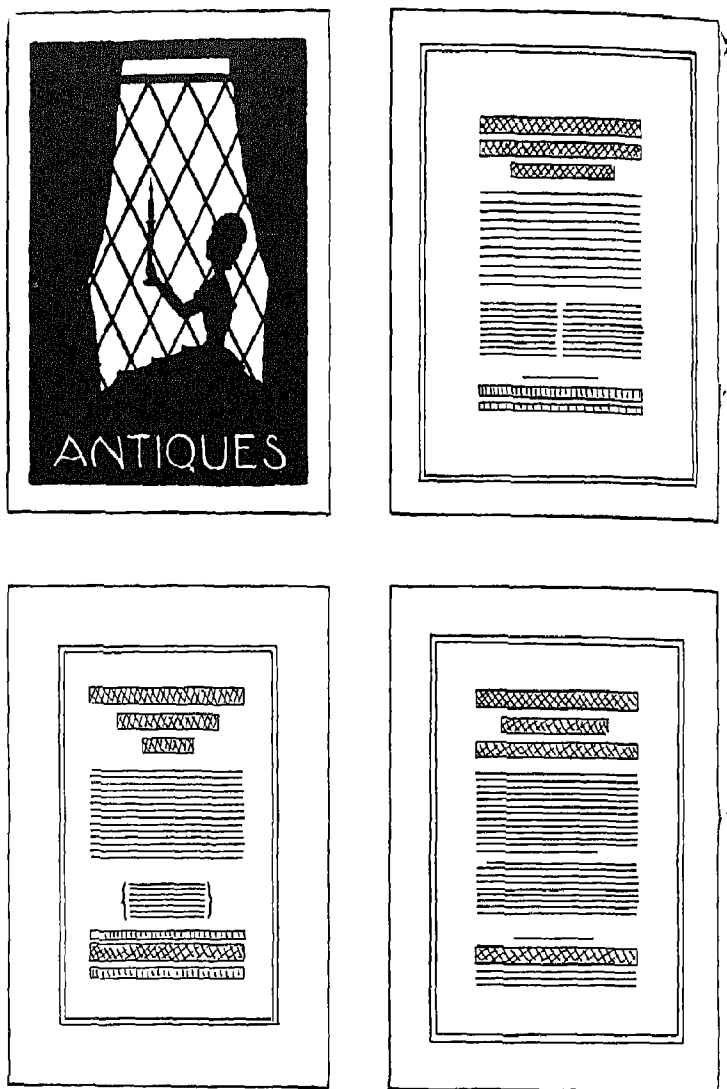


FIG. 41—MARGINS AND BORDERS (1) Narrow border of white space, (2) narrow margin outside border, (3) narrow margin inside border, (4) equal margins outside and inside (bad)



## Pottery & China

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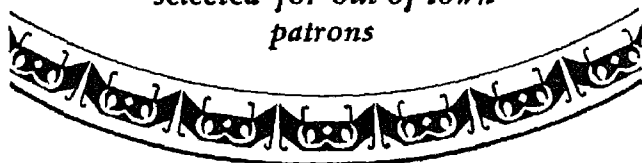
HERE is a beauty and originality in the design and workmanship of all our products of Pottery and China. Vases and Jardinières of Oriental design, Chilean Hand-made Earthen Jugs and a selection of exquisite Masterpieces in Old China

---

E. J. Burd & Sons  
Old Bond Street, London

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*Articles  
selected for out-of-town  
patrons*



the border and the edge of the paper should never approximate the inner margin, as equal margins give the effect of the border floating about in space without any anchor (Fig 41)

A border may be suited to the type face and the copy, yet be undesirable because the elements composing it are inharmonious. Architectural forms cannot be fitly combined with floral units, and good combinations of borders need to be harmonised in tone and colour and also made to form part of a pleasing and congruous blend of elements.

The use of rules to underline words may perhaps be discussed here. It is a practice which cannot be too strongly deprecated. The rule used in this way is a blemish on any page and achieves nothing that could not be gained more effectively and aesthetically by setting the words to be emphasised in italic, in a slightly heavier type face, or by letterspacing the words. The need for underlining words is a corollary to bad copywriting. A good copywriter should be able to emphasise his points without using the device of a gushing and aged maiden lady. Underlined words imply a lack of intelligence on the part of the reader, who is perfectly justified in resenting this typographic dig in the ribs.

## CHAPTER THREE

### PRACTICAL DESIGNING FOR PRINT

A LONG period of training is necessary to become an accomplished typographer, and the many qualifications required for this important work tend to limit the field from which suitable men can be recruited. The finest background is possibly a practical training as a printer, but actual practice in the technique of printing is limited to those who enter the trade in the normal way, that is to say, those who are apprenticed for a period of seven years.

This practical training, however, is not absolutely essential. There are many typographers of first rank who have had little actual practical contact with a printing office, but who have acquired their technical knowledge by intelligent observation. On the other hand, a practical printer will need to equip himself for this specialised job of typographer by an intensive study of design, and a course of abstract design at an art school should prove invaluable. This study should be supplemented by a constantly analytical attitude towards every example of both ancient and contemporary typography.

While a large amount of technical information is given in this chapter, it is impossible to deal with the vast technical knowledge which must be an essential part of the typographer's equipment and which may be best studied in the purely technical books on the subject. An attempt has been made to include information that is of first importance for the daily practice of designing for printing.

#### THE TYPOGRAPHY OF BOOKS

The book to-day is not a thing of wonder and superstition as it was in mediaeval times but a necessary adjunct to modern life. The modern demand for well-printed books has

fostered a growing interest in their format and typography, and the publisher to-day endeavours to satisfy this informed attitude of the general public.

A book is a number of hinged pages. It is not governed by quite the same conditions as a press advertisement or a show-card. It is generally portable, and therefore not entirely dependent on its surroundings. Its format is determined by its nature and use. Who is going to use it? Under what conditions? Its size will be determined by whether it is intended for the pocket, to be used in the hand or on a lectern, to be used often or seldom. Its size is also governed by the standard sizes in which sheets of paper are manufactured. Its proportions will be decided by the length of line and the depth of the page. (The length of line should be arranged so that there will be no difficulty in picking up the beginnings of lines, and the depth by the radius which can be comfortably covered by the movement of the head on the neck.)

The relative proportions may be decided by the number of times that the full size of the sheet (called *broadside*) is folded. A sheet folded once gives a folio size, folded twice a quarto, and folded again an octavo. (The ratio of length and depth of the original sheet remains with each alternate fold.)

Books are printed in sheets of four, eight, or more pages, and then folded. Each sheet makes a section, which is sewn and bound (in correct sequence) together with other sections to make up the whole book. The arrangement of the pages on the full sheet so that, when they are folded, they will fall into correct sequence is called *imposition*.

The disposition of margins, the choice of type face, word spacing, leading, have been already discussed. Other details regarding the arrangement of the printed book may now be considered.

To leave freedom in the number of pages, the text proper of a book is numbered in arabic folio numbers (1, 2, 3, 4, etc.) The front pages, called the *preliminaries*, are commonly numbered with roman numerals in lowercase letters (i, ii, iii, iv, etc.), so that it is immaterial to the main portion of the book how many or how few front pages are eventually

necessary. The treatment of preliminaries and text pages throughout the book must, of course, be in harmony.

Preliminaries consist of bastard title, frontispiece, title-page, advertisement or copyright, dedication or dedicatory epistle, preface, contents, list of illustrations, introduction.

Each section of preliminaries begins on a right-hand page, with the exception of the frontispiece and the advertisement or copyright. No folio numbers are given to the pages unless a section makes more than one page. Each section head, if lower than the normal position (i.e. dropped), must have a uniform drop. Preliminaries are usually printed last.

The Bastard Title (sometimes called the half-title) is used to prepare the reader for the title-page. It should not be prominent, and should consist of the title of the book set in the same size as the type used for the text pages in letter-spaced capitals and should normally be placed about two-fifths down the page area.

The Frontispiece, which may be a half-tone, line engraving, or three-colour half-tone, is usually printed separately and stuck in afterwards. It always faces the title page. Its inscription, when landscape, should read from the foot to the head. It is sometimes the only illustration in the book.

The Title-page had no place in the earliest printed books. The name of the book was written on the cover and the text started on the first right-hand page. To-day the title-page is an important feature. It is the page first inspected and gives the reader his sense of the quality of the rest of the book. It should present clearly the three important things it has to tell: the title of the book, the author's name, and the imprint (which includes the place of origin, publisher, and date). The arrangement should make these three divisions obvious at a glance. Everything that can be omitted is an advantage. Decoration, if used, should never be made more important than the type lines. The use of different type faces is almost invariably inadvisable. The sizes of the type should be limited and need not be larger than twice the size of that used for the text. Punctuation should be omitted wherever possible and the same type design as that used for the text

LE RICCHEZZE  
DELLA LINGVA VOLGARE  
DI M. FRANCESCO  
ALVNNO.



Con privilegio di N. S. Papa Paolo III.  
Et della Illustriss. Signoria di Vinegia.

IN VINEGIA.

NEL M. D. XXXXIII.



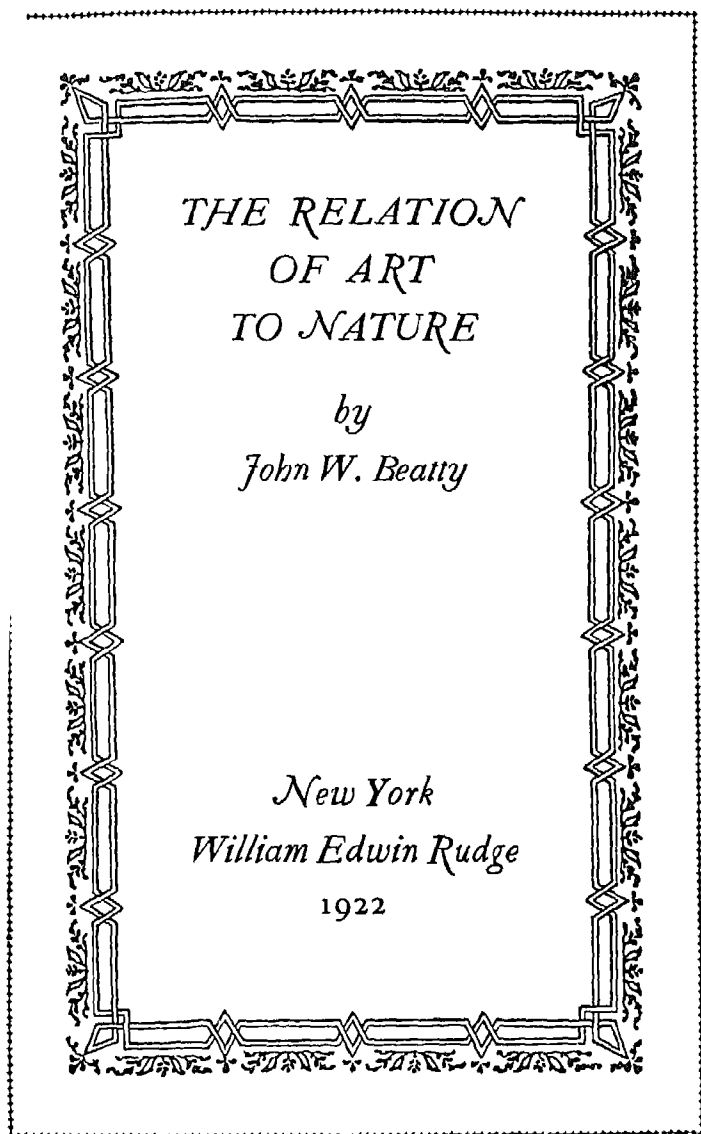


FIG 44—TITLE-PAGE BY BRUCE ROGERS, 1922

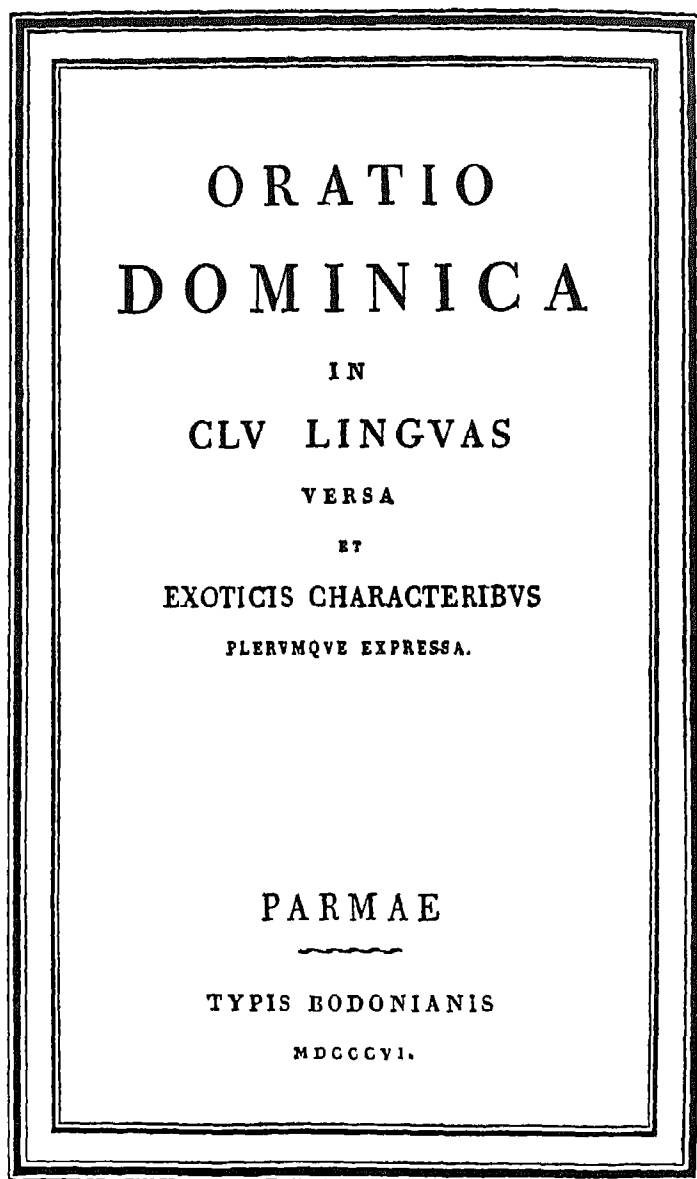


FIG 45—TITLE-PAGE BY GIAMBATTISTA BODONI, 1806

employed, so that uniformity is ensured. If colour is used, it should be used in mass, not spotted about on the page. The title in colour with an answering spot (of decoration, or the publisher's name) is possibly the most suitable treatment. Title-pages should as a general rule be set in letter-spaced capitals, the capital letter then performs a function fitted to its monumental character.

The back of the title-page is often used for a list of other books issued by the publisher, for an explanatory note by the publisher on the production of the book, for copyright notice, or for the printer's imprint. This information may be suitably placed about two-fifths down the page.

The Dedication is usually set in tombstone or monumental fashion, with the name of the person to whom it is dedicated in a larger size, in capitals, or in black letter. Dedications sometimes take the form of a letter.

The Preface is the author's personal remarks to the reader, an explanation of the purpose or origin of the book. It is generally set in the same size of type as the text, unless the writer of it is a person of some importance. If the book has both preface and introduction, the preface may be set in italic to mark the distinction, a practice often adopted when the preface is written by someone other than the author. In this case it should be placed after the contents and list of illustrations.

The Contents pages are almost as important as the title-page in establishing a sense of quality and distinction. Occasionally a brief synopsis of the chapters follows the chapter headings, particularly in history books and similar works. The contents is a list of chapter numbers and titles, and the pages on which the chapters begin. There are many styles, and the book typographer should study closely the variety in presentation which such pages offer.

The List of Illustrations, which consists of the titles of the illustrations in the volume, should be uniform in style with the list of contents. If the illustrations are inserted plates, the words "*facing page*" are inserted before the numbers of the page.

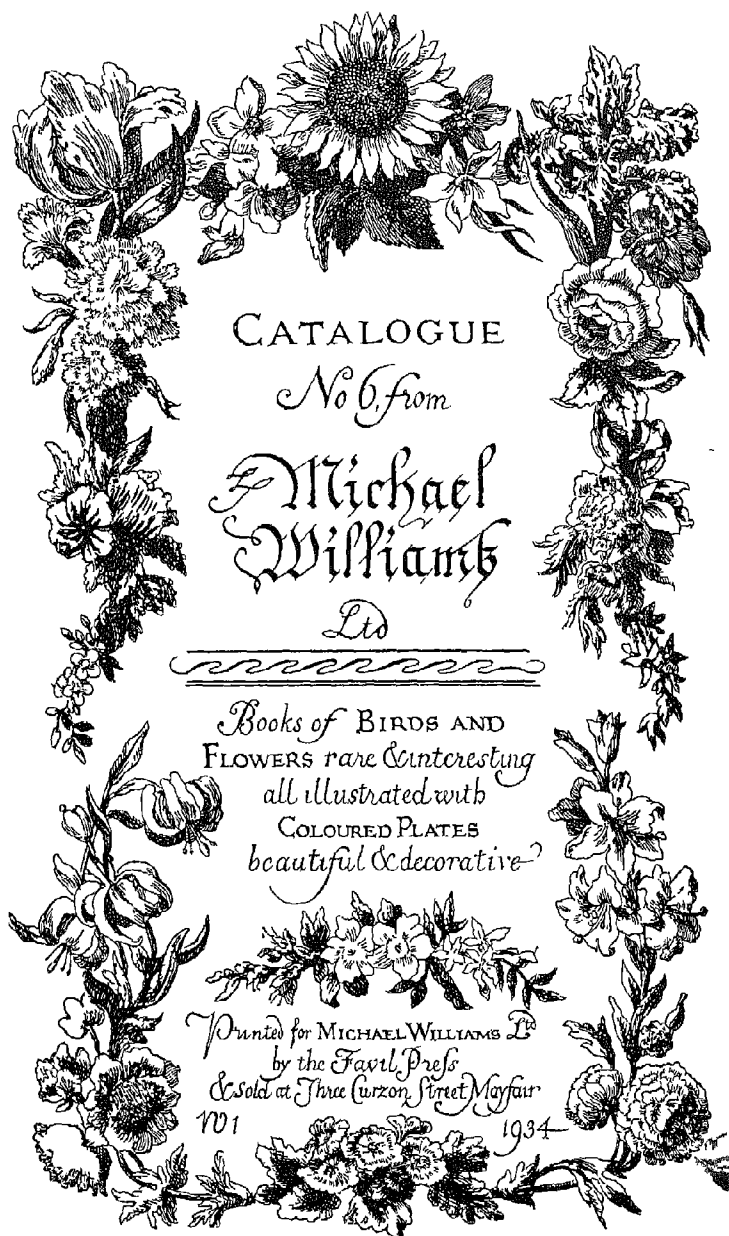


FIG 46—AN ADAPTATION OF AN EIGHTEENTH-CENTURY TITLE-PAGE (CARWITHAM'S COMPLEAT FLORIST, 1747) from an original in five colours

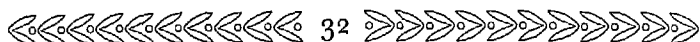
The Introduction should deal with the subject of the book and contain only information having a direct bearing on the text. (*See Preface.*)

The Text Pages of a book have various minor features which determine their typographical presentation, such as chapter headings, running headings, head- and tail-pieces, initials, side-notes, side-heads, shoulder-notes, cut-in notes, footnotes, and quotations

There are several styles for Chapter Headings. A simple chapter heading is usually set in capitals of the text type, and may read "Chapter I," "Chapter One," "Chapter 1." The title of the chapter in this case may be set in small capitals, and the summary of the chapter, if included, may be set three sizes smaller, set as a hanging indention (that is to say, first line full out, subsequent lines indented underneath). Every noun should begin with a capital, sentences or phrases separated by a one-em dash, and the minimum of punctuation marks used. The opening chapter and subsequent chapter headings of a book afford one of the main opportunities to the book designer of producing pleasing decorative effects. It is, however, essential that the treatment of these headings conform not only physically but in spirit to the rest of the book. The book designer must harmonise his decorations with the type of the text, the type face, its form and character decide the key in which he composes his melodies, the harmonic background for his black and white or coloured designs. It is generally felt that some kind of repose or relief is desirable between the end of one chapter and the beginning of another. The space above the dropped chapter head may sometimes be suitably decorated, and so provide a little diversion in addition to a sense of relief. If these decorations can be made allusive and suggest a train of thought which bears on the subsequent text, so much the better.

The Running Heading or page headline probably originated through the need for librarians and others to identify pages which may become detached. The repetition of the title of a book throughout its pages may be a source of irritation if the book consists of many pages. In this case, on

28 THE WHITE DEVIL [ACT II SC. 2



34 THE CONQUEST OF  
MOUNT C W O M P A M A U 35

36 *The Art of the Book*

THE ART OF THE BOOK

SELECTED LYRICAL POEMS

382 *The Letters of LORD JOHN LOWE* [1923]

# *Pride and Prejudice*

FIG 47—EXAMPLES OF RUNNING HEADLINES

# PART IV.

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## A VOYAGE TO THE COUNTRY OF THE HOUYHNHNMS.

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### CHAPTER I.

THE AUTHOR SETS OUT AS CAPTAIN OF A SHIP HIS MEN  
CONSPIRE AGAINST HIM, CONFINED HIM A LONG TIME TO  
HIS CABBIN, SET HIM ON SHORE IN AN UNKNOWN LAND  
HE TRAVELS UP INTO THE COUNTRY THE YAHOO,  
A STRANGE SORT OF ANIMAL, DESCRIBED THE AUTHOR  
MEETS TWO HOUYHNHNMS

I CONTINUED at home with my Wife and Children about five Months in a very happy Condition, if I could have learned the Lesson of knowing when I was well I left my poor Wife big with Child, and accepted an advantageous Offer made me to be Captain of the *Adventure*, a stout Merchant-man of 350 Tuns For I understood Navigation well, and being grown weary of a Surgeon's Employment at Sea, which however I could exercise upon Occasion, I took a skilful young Man of that Calling, one *Robert Purefoy*, into my Ship We set sail from *Portsmouth* upon the 7th Day of *September*, 1710, on the 14th we met with Captain *Pocock* of *Bristol*, at *Tenariff*, who was going to the Bay of *Campeachy*, to cut Logwood. On the 16th he was parted from us by a Storm I heard since my Return, that his Ship foundered, and none escaped, but one Cabin-Boy He was an honest Man, and a good Sailor, but a little too positive in his own Opinions, which was the Cause of his Destruction, as it hath been of several others For if he had followed my Advice, he might at this Time

right-hand pages the page headlines may be used to carry the number of the chapter, a pithy précis of the page contents, or the acts and scenes of a dramatic work. The running heading often embodies the page folio, and conveniently groups together two pieces of extraneous information. A heading may often be accompanied by a decorative element (such as a rule, or border strip), or consist of words and figures only. The capitals of the text type are generally a little too heavy for a running headline, and letter-spaced small capitals are adequate and appear to be becoming a normal practice. Other forms that may be suitable occasionally are small caps with light rule above and below, heading running across both (facing) pages thrown into centre of the book with folio numbers on the outsides, decorative border with folio numbers centred on each page (suitable treatment for a small volume of poems), upper and lowercase in a size larger than the text, unimportant words, such as "the" and "of," etc., in italic. A heading which reads across both pages serves to knit them together as a pair, although it is essential that the wording should divide into equal parts so that the balance of the pages is not disturbed, there should also not be too much space between the page numbers and the beginning of the title wording. This part of the page should never be emphasised in any way that will cause it to be an irritating repetition which officiously meets the reader every time a page is turned.

Head-pieces are rectangular strips of ornament set to the measure of the type page and placed at the top of chapters. They should, of course, be in harmony with the type face and the initial if used (Fig. 49). Tail-pieces are used to fill up a blank at the end of a chapter and should be of the same character as the head-pieces.

Initials are letters larger than the size of the text type with which they are used. The first printers followed the written book in the use of initials, and in most cases these initials were inserted by hand after the book was printed. An initial should suit the type face and should not appear as though it had been added as an afterthought. A successful combination



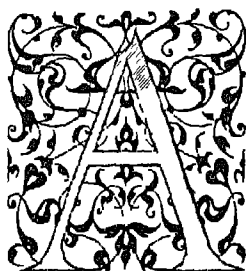


### CHAPTER III

#### OF TWO GENTLEMEN OF WALES, AND HOW THEY HUNTED WITH THE HOUNDS, AND YET RAN WITH THE DEER.

"I know that Deformed, he has been a vile thief this seven year,  
he goes up and down like a gentleman I remember his name"

*Much Ado about Nothing*

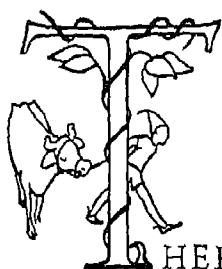


MYAS slept that night a tired and yet a troubled sleep; and his mother and Frank, as they bent over his pillow, could see that his brain was busy with many dreams. And little wonder; for over and above all the excitement of the day, the recollection of John Oxenham had taken strange possession of his mind; and through all that long evening, as he sat alone in the cool bay-windowed room where he had seen him last, Amyas was recalling to himself every look and gesture of the lost adventurer, and wondering at himself for so doing, till he retired to sleep, only to renew the fancy in his dreams. At last he found himself, he knew not how, sailing westward ever, up the wake of the setting sun, in chase of a tiny sail which was John Oxenham's. Upon him was a painful sense that, unless he came up with her in time, something fearful would come to pass. but the ship would not sail. All around floated the sargasso beds clogging her bows with their long snaky coils of weed; and still he tried to sail, and tried to fancy that he was sailing, till the sun went down and all was utter dark. And then the moon arose, and

of initial and text does not exclude a measure of agreeable contrast, but too heavy an initial makes a dark blob, too light an initial fails to give a directional aid to the beginning of the text. An initial of the same type series is usually a little too heavy, although an initial of the same type in a lighter design often harmonises with the text type. Initials should fit as closely as possible to the text lines and align with them. White gaps are unsightly, and type used as initials should have the shoulder or beard cut away to ensure compact fitting. The printer sometimes objects to spoiling a type letter in this way, but this objection may be overcome by offering to pay for the type. With letters such as T, Y, V, W, the type lines which follow beneath may range with the foot of the initial letter itself, so that the upper portion of the initial is in the margin. When the initial has a panel or border around it and is separated from the letters which make up the complete word, care must be taken that there is no chance of the word being misread. If, for example, the initial is a T, the sense of the first word will be utterly changed if the rest of the word is "here" and it is not read with the initial. A similar confusion may arise with the word "she" if the initial S is separated from the "he." An initial may often be made highly decorative and made a feature of the whole typographic style of the book.

Another point which may be mentioned with regard to initials is that it seems an almost invariable rule that when an initial is in colour it is printed in red. This is doubtless a survival of the practice of the earliest printers, but to-day a more distinctive note may be obtained if the second colour does not ape the canonical rubrication.

An initial may be regarded as forming part of the chapter heading. Where allusive head-pieces are used they should be employed in conjunction with an initial in the same style. A "picture" initial which tells a story performs a double function. It serves the function of an initial, and when it contains a discreet but allusive reference to the text (instead of merely embodying unallusive motifs) becomes a very agreeable and unobtrusive method of book illustration which



HERE WAS  
once upon a time a poor widow  
who had an only son named  
Jack, and a cow named Milky-  
white. And all they had to live  
on was the milk the cow gave ev-  
ery morning, which they carried  
to the market and sold. But one  
morning Milky-white gave no

FIG 50—A PICTURE INITIAL BY ARVILLA PARKER TO  
"JACK AND THE BEANSTALK" (RUDGE, NEW YORK, 1935)

offers a fruitful and as yet scarcely explored field for the book illustrator (Fig. 50)

Side-notes are small groups of words placed in the margins on the outer sides of the text to draw attention to the matter opposite them. The measure of the text must generally be reduced a little. These notes are usually not inserted until the author's final corrections have been made.

Side-heads are the first words of a paragraph usually set in a bolder type, as a heading to the paragraph. The text follows on after a full point and a one-em dash. It is a treatment commonly used in encyclopædias, glossaries, and so on.

Shoulder-notes are similar to side-notes, except that there is only one to each page. They may consist of the chapter title, or in history books of a date (1250-1315) or the name of the monarch.

Cut-in Notes are notes let into the text. Lines of text are indented several ems, and in the area thus made a few words are inserted which form a kind of heading or title to the matter of the paragraph. The type used for the note is usually heavier. This is a form of heading often used in school books to break the monotony of solid pages of reading matter.

Footnotes are used at the foot of a page in three sizes smaller than the text type. They are set as ordinary paragraphs and prefaced by the common note signs (\* † ‡ § || ¶). If there are more than six on the page, the signs are doubled (\*\* ††, etc.) If the footnotes are many, it is preferable to use superior figures (figures about half the size of the type with which they are used and situated at the top of the letters). Footnotes should be separated from the text lines by a blank line, a full-length rule, or a rule of about 6 or 8 ems long on the left.

Quotations, either of prose or verse, should be set two sizes smaller than the text. Quotations (inverted commas) are unnecessary when the quotations are indented on both sides or set in a smaller type.

Sometimes the size of type for a book is difficult to determine. In a crown octavo, for instance, a 12-point type that has a large x-height seems too big, and an 11-point or a

12-point with a small x-height is likely to be preferable. In a demy octavo all the 10-point types seem too small, and a large 11-point, 12-point, or a small 14-point is more likely to make a pleasing page. If the principle of alphabet width is applied to the chosen measure, it will generally be found to be an assistance in choosing a suitable type size.

In addition to preliminary and text matter, other sections are sometimes added after the text, such as Appendix, Glossary, Bibliography, and Index.

An Appendix always follows the last page of the text in the same size of type. The page numbers of this section should continue on from the text. The running-head "Appendix" may be used. An appendix is additional matter relating to the subject of the book which it is not desirable to include in the body of the work. If, in an important volume, there are several appendices, they are designated "Appendix A," "Appendix B," and so on.

A Glossary is a list of technical terms used in the volume. It is usually set in the same size type as the index, the terms being set in a bold type or in italic.

The Bibliography is a list of books relating to the same subject as the book. Sometimes it may be a guide to similar books recommended for the reader's further study, or a summary of (or index to) extracts quoted in the book.

An Index is an important part of a book, and should seldom be omitted. It is always the final section of a book, and is an alphabetic summary of the contents, consisting of a reference and the page number where the reference may be found. The making of an index requires not only a thorough knowledge of the book, but considerable ability in analysis. The compiler of an index should have a faculty for determining the word under which the reader would expect to find the subject indexed. Having decided this, he should avoid any tendency to proceed to index the subject under every possible word that it will admit.

The paper used for a book depends largely on the price it is sold at and the production cost of the book. A book that is intended to endure for more than a few years should be

printed on a rag paper. For novels, where the bulk of the book is considered a selling asset, a thick antique will achieve this, a wide-set type face, such as Baskerville, will also increase its bulk. Alternatively, there are several kinds of fairly thin papers which, with the economical setting that such a type as Fournier gives, will result in a considerable saving of bulk. Generally speaking, the paper should be as good as economic conditions can allow. Although hand-made papers are rarely used except for luxury books, it has dust-collecting edges which it is usually considered a vandalism to trim off. As Mr Stanley Morison remarks, “. . . none but the brave will disregard the superstitious love of the book-buying public for its untimmed, ugly and dirt-gathering edges—for consumer-demand is finally responsible for the issue of books which are not books printed by presses which are not presses ”

#### THE TYPOGRAPHY OF ADVERTISING

As the function of design is to provide forms which allow the maximum scope in expression for the ideas expressed, the work of the designer of printed matter is to create forms which shall perform that purpose adequately. Good design in advertising literature and press advertising is of great importance because it has a vital purpose to achieve.

Every advertisement should be aimed at increasing sales. The closer it concerns itself with sales and tells about the goods (and about little else) the more effective it is likely to prove.

Earlier advertising put no restraint on the tricks used to catch the eye. Badly arranged masses of distorted types and crude drawings were considered legitimate in the competition of shouting louder than one's competitors.

To-day saner methods of winning prospective buyers are used. An advertisement must do something more than win attention, it must make a pleasant and lasting impression on the buyer's mind. This impression must also last long enough to cause ultimate action. In short, an advertisement must not only win attention at the time but make the reader

remember the goods long enough—and pleasantly enough—to make him buy them

Generally it is wise to avoid the cheap vulgarity of black types and heavy masses, and also the arrangement that suggests expensiveness but not exclusiveness. One approach is too cheap and the other seems to put a premium on the price of the goods.

The print-planner is not normally greatly concerned with the preparation of the copy but with its adequate expression; his work is to give expression to the copy, first and foremost. The form in which he clothes the copywriter's arguments should be related to those thoughts and be framed to appeal to the potential buyer of those goods.

The designer has to realise the kind of goods and the type of purchaser and present the copy in a form that will harmonise these two elements.

This does not imply that there is a hardware type face or a soap type face, but that type can be employed to suggest trains of thought which are sympathetic to the purport of the copy.

The technique of right presentation is of vital importance, and the typographer should seek constantly for methods of illustration, good type faces, and forms of arrangement which may be related more closely to the goods and the purchasers of the goods which he is advertising.

An advertisement is not eloquent until it meets the eye of the reader. A salesman is a personal and individual missionary for the goods he sells; the printed advertisement is a locked mystery until the eye interprets it. It is therefore necessary that every advertisement should be made as individual as the technique of graphic art can make it.

Printed advertising to-day consists mainly of advertising in the press, direct-to-consumer advertising, and position advertising.

The first kind includes advertising in both the daily press and in periodicals, although these media may differ considerably. The varying conditions under which each kind is produced and read affect the preparation of advertisements.

which are to be inserted in them. The appeal of the daily newspaper is a general one; everyone reads it, and almost any type of goods may be advertised in it. The magazine, on the other hand, deals with a certain section of the community only, and the goods or service advertised therein must appeal to the particular reader or it will be ineffective.

Newsprint requires a coarser screen of half-tone block than the better paper of the magazine, but the illustrations may be larger. Blocks of fine line and half-tones of fine screen may often be printed on a magazine paper, and the richer colour of the ink and the higher quality of the presswork enable smaller type faces to be used and printed clearly. Newspaper advertisements are presented instantaneously and have to compete with adjacent advertisements for attention; they need to be defended by some distinctive border or rule so that they are isolated from their neighbours. In a magazine the advertisements are presented page by page (except in the case of half-page and smaller advertisements, where even then the competition is far less than in the newspaper), and defence is seldom essential. The newspaper is read in a hurry, in moving vehicles, restricted areas, under bad light. If the reader's attention is not captured quickly and some impression made in the fraction of time in which he glances at the advertisement, he may never notice it. Longer copy may be used in a magazine. It is normally read at home in a comfortable chair, often re-read, kept for weeks, passed on to friends (where it has a secondary circulation), left on doctors' consulting tables, given to hospitals, and so on. The magazine is often still able to pull results many months after it is published. More care may be taken with the preparation of advertisements for magazines, as magazines are not issued daily and more time is available for their preparation. The circulation of the newspaper is, of course, considerably higher, but the price paid for the space is also greater.

In direct-to-consumer advertising new conditions arise. There is no immediate competition, production costs are not artificially inflated by rate charges, and the printed item is distributed to a specially selected list of people. It masques-



rades as mail, and often flatters by suggesting to the individual that he has been specially favoured.

The unit of direct mail is the printed piece, and its form is decided by the effect desired to be produced in terms of goods to be sold. If an advertiser knows why he wants a certain piece of direct mail, he should know how much it is worth to gain his objective.

Practical considerations again determine the plan. A container must be strong enough to protect its contents until they are consumed, a blotter should blot well, and if it gives a calendar of the month it should be plainly legible and not crowded out by advertising matter.

A booklet gives opportunities for telling the story of the goods or service which the limited space of the advertisement precludes. It may be advisable to plan it in typographic accord with the press advertising so that it is identified immediately the recipient receives it. Cover title should have little wording and tempt the reader to read further. The durability of the cover needs careful thought if the booklet is to be preserved for permanent reference.

In a booklet the size of the type will be decided by the nature of the goods and the class of consumer to whom it is addressed. Goods which are luxurious should be luxuriously printed. No optician would be foolish enough to talk about the need of spectacles in an 8-point type face.

Many forms of position advertising give special opportunities for striking treatment. Showcards, cut-outs, counter display, posters, and bills allow the use of effective printing processes and the particular quality which they give.

The attitude of the retailer who is to use this material for propaganda is worth considering, and co-operation in this respect should be of value to the designer in preparing his work.

One important point which is often overlooked applies to all advertising. While due attention and care are given to headlines and display types, the text matter is often left to take care of itself, with the result that it is sometimes dull and uninteresting.

Text matter should not be crowded, but arranged to invite reading. Paragraphs may begin with indentions, initials, capitals, a larger size of upper and lowercase, certain lines may be centred in the measure, or the last lines of paragraphs centred on the measure. Points, full em space after sentences, and other pauses in the text may be introduced, and many other devices which will enliven the natural dullness of a rectangular grey patch without any relief. All these devices are legitimate and almost invariably desirable in text matter in advertisements; they are never desirable but are an impertinence in bookwork.

#### HOW A JOB IS PRINTED

The first stage in printing is the setting of the type, or the arrangement of the letters in words and sentences from the manuscript or typewritten copy. This process is called "composition," and the workman who does the work is called a "compositor." In hand-composition each letter and space is picked up separately from a pair of cases, or sometimes a single case. Where a pair is used, one is placed above the other on a "frame." The upper case contains chiefly capital letters, small capital letters, the lower case contains the small letters or minuscules. The compositor picks up each letter and places it into a "composing stick," which is a kind of hand-tray, putting a space after each word. The composing stick is adjustable and may be adjusted ("made up") to any measure along its length. A "setting rule," which is usually a piece of 3-point brass rule with a neb at one end, is placed into the stick before he begins to set a line, and is placed over the line when it has been spaced out to the measure. This is used to prevent the following lines from catching on the nicks of types that have been set. When he has placed as many letters in the line as it will take, he must reduce the width of the spaces to get a complete word in, divide the word, or use wider spaces to space the line to the measure to which the stick is set. This he does by spaces of varying width, taking care to see that the *apparent* space between the words is equal. He proceeds to set the copy line by line until

the stick is full. When the stick is full, he lifts the type out and places it on a tray, known as a "galley."

If the lines are to be leaded, he places the leads in the stick one by one as the lines are composed. When every line is set for the page or advertisement, he spaces the matter out to the correct depth and ties it up with a thin twine ("page cord"). The page can now be slid from the galley without fear of the type falling over and getting mixed up ("pied"). The page is then "pulled," that is to say, placed on a hand-press, inked, and an impression taken for the proof-reader, who reads it carefully with the copy and marks any mistakes that the compositor may have made. After correction the page is next placed on a table, flat-topped with metal (formerly stone, and the table is still for this reason called a "stone"), and "imposed," that is to say, wood is placed around it and it is locked up in an iron frame. If there is more than one page, as in bookwork, two, four, eight, or more pages are imposed together in an iron frame ("chase") with crossbars, in such an order that when the printed sheet is folded and cut the pages will appear in correct sequence. The page or pages of type are kept in place in the chase by means of wood ("furniture") and wooden or metal wedges ("quoins"). When properly locked up the chase, with the type and the wood and the quoins (now collectively called a "forme"), is firm and portable and ready for placing on a printing machine. If it is a small job or single page, it is printed on a platen machine, if it is a section of a book, it is printed on a cylinder machine. Newspapers are printed on rotary machines from stereotypes plates which are curved to fit on cylinders, and other cylinders carry the "web" (or roll of paper) which takes the impression. After printing the paper web is carried forward, cut, and folded on the same machine.

Letterpress printing consists of type and blocks, paper, ink, and impression. Impression is the pressure of type on paper produced, usually, by means of a printing press.

A man who performs presswork is called a machine minder or machine manager, and his work begins where the process of composition leaves off.

There are several kinds of presses: hand, platen, cylinder, and rotary. The first three are flat-bed presses, and they print from a flat, plane forme instead of a curved plate or surface, and they print on one side of the paper only. A cylinder press which prints on both sides of the paper before the sheet is delivered is called a "perfector."

The hand-press is the original device for obtaining printing impressions. The first presses were made of wood—Gutenberg's press was an adapted wine-press—and they were operated by means of a screw and a lever. Iron has replaced the wood, and the leverage has been considerably improved.

In a platen press, impression is effected by a flat platen and taken on a flat surface from a flat forme. These presses are of various kinds according to the platen, bed-motion, and inking. The bed of the machine, to which the forme is fixed by a clamp, is usually stationary, and the platen on which the paper which is to be printed is placed moves down to it with a kind of hinge action. Inking takes place while the platen and the bed are in the open position.

A cylinder press is one in which the impression is effected by means of a revolving cylinder which carries a sheet of paper and impresses it against the face of the forme, which is maintained in a flat horizontal bed reciprocating below the cylinder.

The rotary press has a curved (semi-cylindrical) printing surface. Movable type cannot be used, and curved stereotypes and electrotypes are employed and clamped on to the cylinders. The rotary press is fed from a continuous reel ("one mile of paper for the *Daily Telegraph*"). The paper is taken to the first pair of cylinders and printed on one side, then taken to the second pair of cylinders and printed on the reverse side. It is then carried along to the folding and cutting mechanism, and delivered completely cut and folded.

The process of preparing a forme and correcting unevennesses so that the impression shall be clear and distinct, not too dark or too light, is called "making ready."

This is necessary because no forme or block, however composed or engraved and imposed, is ever quite perfect, and it

is also often necessary to give varying degrees and kinds of pressure to different parts of the forme; blocks and type have also to be made to the same level.

Another process that must be done is to arrange for the print to appear in the right position on the paper and set the sheet-guiding devices so that all subsequent sheets can be fed into the machine and be printed in exactly the same position.

Equalisation of impression is effected by underlaying, interlaying, and overlaying

Underlaying consists of pasting pieces of paper under type, rules, or blocks that are too low. Interlaying consists of placing a specially prepared cut sheet between a plate and its mount in order to increase or decrease pressure, and so make solids and highlights appear in greater contrast. Overlaying consists of pasting pieces of paper on the tympan or cylinder to give more pressure, or to cut away parts on the tympan or cylinder to reduce pressure.

Make-ready is an important process in good letterpress work, and is a process which it is not advisable to rush. The time taken to do the work may vary from an hour or two on a forme of four pages of demy quarto consisting of type only, to about thirty hours on a forme of thirty-two pages of royal octavo which contains half-tone blocks. Make-ready on formes of colour half-tones usually takes much longer, varying from between four to thirty hours on the first forme of colour to six to thirty hours on the subsequent colours. If the blocks are not mounted on metal, the work may take even longer.

Descriptions of electrotyping and stereotyping, the processes by which formes are duplicated in cast metal, have already been dealt with in Chapter One of this work.

Nowadays the greater part of body composition or solid paragraph matter in types smaller than 18-point is set on mechanical typesetting machines. The Linotype and Intertype set up complete lines of type ("slugs") by casting them in a solid piece. These machines are operated by a keyboard. On depressing a key a matrix is released from the magazine

above and takes its place in the assembler. Wedge-shaped spacebands are placed by means of a space key between the words. When a line of matrices and spacebands is completed it is transferred to a mould, and a bar or slug is cast. The slug, after being trimmed to correct height and body, passes to its place on a galley and is placed beside its fellows ready for immediate use. The matrices are carried up and distributed into the magazine in their appropriate compartments.

The Monotype casts separate types, and the process is performed in two operations. The operator punches holes in a continuous strip or ribbon by means of a keyboard arranged as the universal typewriter keyboard. This perforated strip is then placed in a casting machine, and the perforations cause, by compressed air, the particular characters required to be cast from a die-case which may contain as many as seven alphabets. The Monotype allows a much harder metal to be used (because it casts individual letters) than is possible when a line of type is cast in a solid piece. Consequently impressions from it are apt to be clearer.

These mechanical typesetting and casting machines are intricate mechanisms, and the typographer should avail himself of the opportunities which printers and the manufacturers offer for seeing them in actual practice.

#### THE LAYOUT

A layout may have three uses, to indicate roughly to a compositor the general arrangement of a page or book, to give a complete and detailed specification and plan of the finished work, to act as a guide to the estimating departments as to the quality or grade of the work.

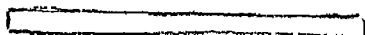
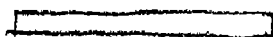
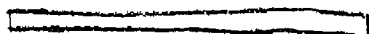
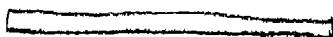
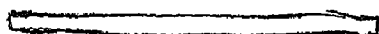
Generally speaking, there are two kinds. The first kind is the rough draft for the use of the composing department only. This need not be elaborately finished, but should show only the minimum required for the proper interpretation of the typographer's ideas (see Fig. 51). Care is essential to ensure that the instructions concerning the technical processes are intelligibly given. This will obviate queries during

the progress of the work. The oversight of apparently unimportant details often leads to delay and wasted effort. These instructions should include the exact size of the paper and the type area, if a border is required, what it is to be, if rules, the thickness; the margins between type and border, or the margins of the book or pamphlet when trimmed; the names and sizes of the types and the measures to which they are to be set; whether the type is to be leaded or solid, the blocks to be used, and whether they are to be cut down or altered in any way. If blocks are not available at the time the exact sizes should be given.

Secondly, there is the carefully prepared layout, usually in ink, for the customer or buyer (see Fig. 52). This should give the client (who may be unfamiliar with printing technique) a complete idea of the finished work. It is obvious that a layout of this kind which cannot be followed in its every detail is of no practical use. The client who approves it does not get the design he contracted for, the compositor is unable to follow its instructions and has consequently no respect for its author, and the proofs have to be revised several times before a satisfactory compromise (if such a thing exists) is secured. This careful layout may be lettered to imitate as closely as possible the type faces which are to be used, or the faces may be shown by paste-ups from proofs. In the case of a booklet, a dummy should be prepared of the exact size required. Proofs of the illustrations, borders, and type faces may be pasted into position, and colour, if any, suggested. When the page margins have been decided the paper is pricked through with a scribe to avoid the drudgery of measuring and ruling out every page. The dummy should not be marked with any technical details such as the names and sizes of types (these may be inserted when it goes to the composing department after the client's approval), but the margins should be kept clear and the dummy be as near as possible a replica of the finished work. Small types may be indicated by ruled lines or lines in wash approximating their weight and colour. The best plan, where the job is on a white paper, is to paste up cuttings of the actual types. Wherever

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BREAD



EAT MORE  
BREAD

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FIG 51—ROUGH LAYOUT FOR COMPOSING DEPARTMENT



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**BREAD** is the only staple diet  
that all the civilised  
nations of the world  
accept as essential.  
It has been called the  
staff of life, therefore

**EAT MORE  
BREAD**

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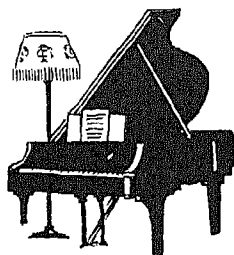
possible the dummy should be made up from the actual papers to be used. If this is not practicable, samples should be submitted to the client with the layout and any other information affecting the work that will aid him to visualise the final form, so that it is available for reference and discussion. In this connection it should be always kept in mind that the client is normally unfamiliar with printing processes.

When layouts are drawn in pencil it is better not to draw lines on which to make the lettering. This may be avoided by making the lines on the paper with a blunt instrument (such as an agate), or by using a strip of paper and drawing the letters down to its edge, adding the tails of descending letters afterwards (where the wording is in lowercase). The proportions of the letters should be as near as possible to the original type face, particularly in width, and every detail of the layout must be capable of being followed out exactly in its arrangement, balance, and proportions. If a type face, when it is set, is not of the same measure and depth as indicated on the layout, there will be a confusion in the result of the whole design, because the pleasing arrangement of the lines and masses of the layout will not have been communicated to the finished work.

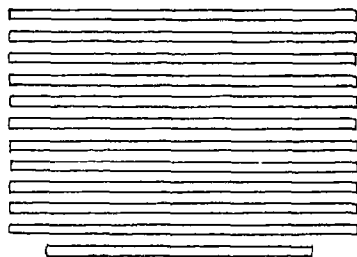
Many typographers use a thin bond for layout work, which enables them to trace through large display letters from the type specimen book and to lay the paper over small types, and so estimate the amount of type matter that areas will occupy. Care must be taken, however, with display sizes of type that the letters are not drawn more closely together than the types are fitted, or that the type lines are not drawn closer together on the layout than the body depth of the type size will allow.

#### HOW A LAYOUT IS EVOLVED

The use of a layout originated in the desire on the part of the buyer of print to obtain good typographic arrangements from the printer. This desire constituted in effect a censure on the printer, who at first resented being told how to do his job. There is still to-day a certain amount of resentment by



PIANOS PAR EXCELLENCE  
FOR CONNOISSEURS



THE BROADMEAD  
COMPANY

OXFORD STREET    NEW BOND STREET  
PICCADILLY CIRCUS

FIG 52—CAREFULLY PREPARED LAYOUT

printers to the layout, although the modern printer nowadays employs his own typographer. As the education of apprentices on right lines improves, much typographic planning will be unnecessary, as the compositor will possess the ability to make his own layouts as a preliminary to setting display work and general jobbing. Nevertheless there is a vast amount of typography that needs the co-operation of commercial artist, printer, and manufacturer, and the more completed plan that cannot be so instantaneously arranged.

There are many advantages of planning in advance the form that a printed item shall take. Corrections can be made on the layout before the work begins, thus avoiding the expense of author's corrections. The work can be set more quickly because there need be no preliminary experiment on the part of the compositor. Those responsible for the completed work are able to see in concrete form the plan of the finished work, and, if necessary, to revise it or submit it to the buyer. When the design is sent for setting the compositor can see at once what is required, and, in the case of a large job, he is able to make up the forme as the work proceeds because he knows exactly how much space each part of the work will occupy. The work can also be distributed among several compositors or typesetting machine operators if it is urgently wanted.

A finished plan of a house, machine, or a piece of furniture eliminates any element of chance about the final result. The layout now takes its place among these working drawings.

The capital difficulty, as with most things, is how to begin. How does a design evolve? Why does the designer use that particular type face, and in that size?

"If we intend to make some thing," says Edward Johnston, "the clearest conception possible of *what that thing* is, is our first concern; for that which it is in deed is the realisation of our intention. I say the clearest conception possible, because it is doubtful if a man can be quite clear as to what he intends until he has done his work, but to achieve reality it is essential that we have a measure of clearness in our intention. The right way to set about making a chair is to intend 'chair' -

with all our will, our old friends simplicity, distinctiveness, proportion, come to our aid, and if we are happy, the chair—legible, or at least recognisable—will be achieved.”

The first steps are, of course, to take a survey of the material to be used—illustration, copy matter, name block, paper, etc., and to determine the area that the printed surface is to occupy, or to make a dummy of the book or booklet.

The copy matter or wording should be carefully studied for several reasons—because the object of typography is to give expression to copy, to discover the sequence of the thought contained in it, and to ensure a logical order of presentation. The actual arrangement of the design will then depend on the elements composing it—title-page, contents pages, text, etc., or in the case of a press advertisement, picture, heading, trademark, price, or name of the manufacturer. This will normally be decided by the purpose of the work, the nature of the subject or product, how used, class of people to whom the appeal is addressed, whether sold on price or quality, general appeal or limited appeal, bold and vigorous or quiet and dignified in style. The medium by which it is presented may also affect the style of the design.

Having surveyed the copy and the illustrations and considered the exact purpose which it is intended to effect, the designer, with his format before him, begins to visualise the various forms which the design might take. When these ideas begin to crystallise, he makes rough thumbnail sketches similar to those shown in Fig. 53—perhaps as many as a dozen—until he finds a form that will serve as a basis for his finished design. It is an advantage to make these rough sketches a quarter of the size of the original. If a piece of paper the same size as the completed job is taken and folded in half across its long dimension and in half again across its short dimension, four areas will be created which are each a quarter of the original size, and which are in exactly the same proportion. These may be used for rough sketches, and when it becomes necessary to convert them into full-size layouts it is easy to double each dimension (whether it is the length of a line or the width of a margin). In this way the completed

layout loses nothing of the vitality and effect of the rough sketch, and the designer is assured that he is working to the same proportion as the finished job is to be.

The next step may be to make two or more sketches to full size, remembering that every line and area made on the sketch represents a certain part of the copy and is designed for it. It is not practical or sound to evolve a pretty framework or design and fit the copy and illustrations to it.

These full-size roughs will demonstrate how the elements fit together and whether the pattern created is good, whether the distribution of the printed area and white paper is pleasing. It may be necessary to combine groups or reduce the number of elements, to enlarge a detail or try it in a different position. This may be done by working over the roughs with thin bond paper—in this way the designer always has every attempt to compare. Ideas for original presentation that occur at odd moments should be noted at the time, or they may not be recalled. Once the idea is born, its final form is a matter of experiment on paper.

An approximate and pleasing rough sketch having been made, the designer now begins to translate it into typographic form by scaling down the illustrations, estimating the type faces, deciding the exact measures and margins, and definitely consolidating every detail.

The arrangement of the heading and the main display lines should be so that the meaning is easy to comprehend line by line and that there is no awkward division of word or of sense. Compare the following:

Easy to Take  
Apart and Put Together

*The Times*  
influences the  
mass market in  
a way no other  
paper can

Easy to Take Apart  
and Put Together

*The Times*  
influences  
the mass market  
in a way  
no other paper  
can

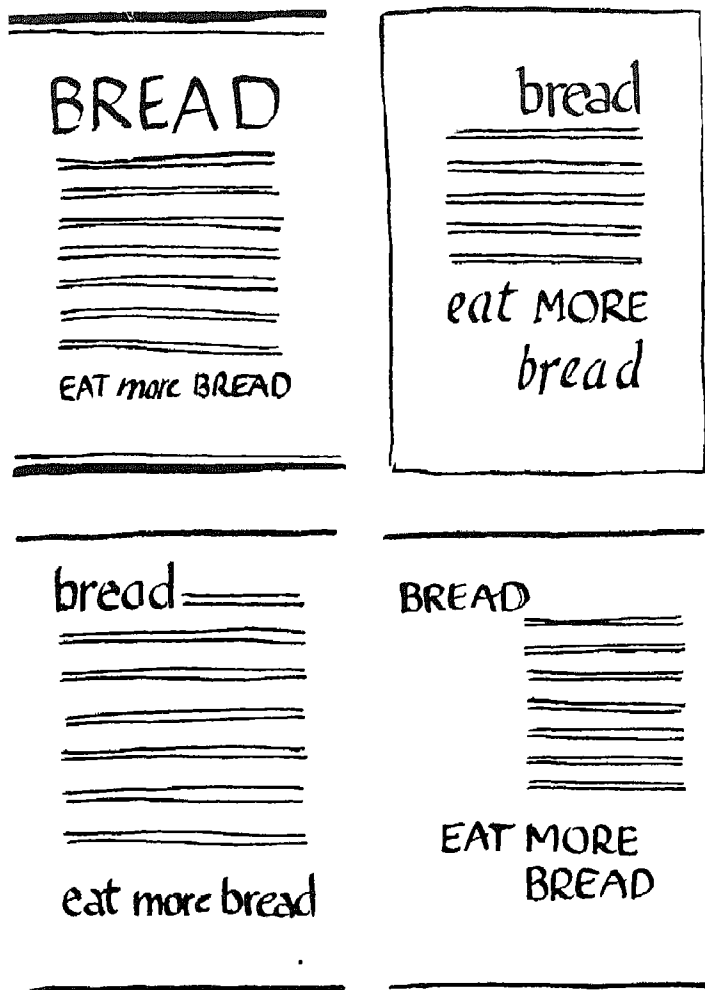


FIG 53—THUMBNAIL SKETCHES

Another point with regard to headings which will often make a dull announcement into an attractive advertisement. Often the copy for an advertisement has a heading which is too wordy. "It is of the greatest assistance to your health," for instance, will be far more difficult to arrange as a display than "A great help to your health." Often by a change in the wording the message will be more dramatic and be improved. This is important with regard to copy prepared by those other than copy-writers, such as local advertisers, manufacturers, and business executives. The designer and printer should consider that such suggested alternatives are part of the service that he owes to his client.

In all designs the distance at which the types are to be read is important. If types are used on a handbill which are large enough for a poster, the reader's arms will not be long enough for him to read it comfortably. The relationship of type size to measure has already been discussed, but it should be noted that in display type a size too large for the measure will often bring about undue disparity between the word-spacing in lines. In such cases the design should be arranged to suit the agreeable flow or the sense of the words.

Above all, the designer should realise that words are to be read and that any arrangement of words must effect the object of getting them read with the minimum amount of effort on the part of the reader.

#### LETTERING

The final effect of a piece of printing can be more easily judged if the lettering on the layout is an approximation of the types to be used. It is also sometimes an advantage in preparing layouts for the uninitiated client, whether he is the contact man who is guarding the customer against anything untoward happening to the work during its progress or the managing director who may be responsible for approving the printing of a large concern, to give the layout the air of the finished work. The amount of time spent in the preparation of any layout will depend on how it is



intended to be used; composing-room layouts will need a mere outline.

It is an asset, therefore, for the designer for printing to acquire a ready facility for making good letters.

It will nevertheless be a waste of the student's time to commence this training by copying well-known type faces without a preliminary grounding in the technique of letter construction. It is essential for him to appreciate the principles of proportion, balance, and general formation underlying the drawing of letters, otherwise he may adopt practices which may take a long time to eradicate. Only three or four strokes are needed to make a letter, a letter that needs more must have been badly formed to begin with. As time is at a premium in a modern printing office and advertising department, lettering must be performed quickly and accurately. There is no need for lettering on layouts to be as perfect as that which is required for reproduction by the line process, but it should have a typish appearance.

There are certain qualities which are possessed in common by all letters. Firstly, they should be legible, secondly, they should be fit for their purpose, and, thirdly, they should be efficiently drawn.

The student should begin by learning the basic forms of the letters, and the capital letters of the Trajan Column make an excellent model. Reproductions of this letter may be obtained from the South Kensington Museum or in the booklet published at sixpence by His Majesty's Stationery Office. From this model a simple basic alphabet may be constructed. As an alternative to this a large size of the Gill Sans capitals (say 72-point Gill Extra Light) may serve as a model (Figs. 55 and 56).

The forms should be drawn in pencil about one inch in height and practised until they are mastered. They should be drawn in a large size so that errors may be seen at once, and also to train the hand to travel with confidence over large areas. Every stroke must be made deliberately and not in a series of little strokes. The paper must never be moved, the head and shoulders should be kept still, and no instrument

of any kind should be used. Suitable materials are any paper with a surface that the pencil will take and a 2B pencil. No india-rubber should be used, if a mistake is made, the letter should be started again.

A pair of lines to mark the top and foot of the letters only need be drawn as a guide for the depth of the letters. As many designs of printed letters are unfortunately of the same width, the student may be tempted to repeat this fault. The student must also guard against the common faults of making B, E, F, L, P, and S too wide, and C, D, G, and O too narrow. The latter are based on the circle and should not be condensed in any way. Note also that the tops of A, M, N, V, and W should cut through the normal top and foot lines to correct optical illusion, otherwise they will tend to look too short, particularly when serifs are added later.

It is sometimes a good plan to trace over letters in order to get the feel of their proportions and to become accustomed to the practice which will form part of the designer's regular work when preparing certain kinds of layouts. Any duplicating paper may be used for this practice.

The capital letters should be practised first, the student may then practise the lowercase, which should be drawn at first on guide lines of about  $\frac{2}{3}$  in. apart to represent the x-height of the letters. The lines composing the lowercase letters, it will be noticed, are composed mainly of straight or circular lines. The tendency to compress the letters or to point the rounded portions should be avoided. It is unnecessary to draw guide lines for the tops of ascending letters or the feet of descending letters. The depth and height of these strokes should be estimated.

The next step is to practise a formal hand (Fig. 57). It cannot be too strongly urged that this alphabet should not be commenced until the basic forms are thoroughly mastered, as the basic form constitutes the skeleton of all subsequent forms.

For the formal hand special broad-pointed nibs are required, which may be obtained from most artists' material dealers. The broad point of this type of nib enables the letters to thin and thicken quite naturally as the pen moves. For

A B C D E F  
 G I L M N O P  
 Q V R S T X Z



FIG. 54.—THE CAPITALS FROM  
 THE TRAJAN COLUMN

A B C D E F  
G H I J K L M  
N O P Q R S  
T U V  
W X Y Z

FIG 55—GILI SANS EXTRA LIGHT A BASIC ALPHABET

abcdefghijklmnopqrstuvwxyz  
23456789

FIG 56—GILL SANS EXTRA LIGHT A BASIC ALPHABET

practice work a wide nib is advisable. Any ink will do for this practice, and Stephens' Black Ticketing Ink is cheap if a black ink is desired.

In making this alphabet the pen must be held at a constant angle so that both edges of the nib are always touching the paper. The nib is held so that it makes a full-width stroke at an angle of 45 degrees writing from left to right, and a thin stroke when the pen is moved from right to left.

Fig. 58 shows a pen-drawn alphabet which is almost identical in construction to the formal hand, except that the angle of the pen is changed and the full stroke is produced when drawing an upright line and a thin stroke when the pen is moved horizontally. As in the previous alphabet, it is essential that the angle at which the pen is held should be maintained. This alphabet is known as half-uncial, and is a modern form of an historic manuscript form.

Page 25 shows an *italic letter* founded on a fifteenth-century model, which was made in the same way (as far as the angle of the pen is concerned) as the formal or oblique pen hand. It is important in making these letters that they be sloped at a consistent angle, about 15 degrees from the vertical. Serifs may be constructed as in the formal hand.

Display letters as in large type may be drawn with the same pen, using two thicknesses of the pen (or more as necessary) to give weight to the letter strokes.

The difference between most type faces lies mainly in the treatment of the serifs. Their individual serif-formation decides which form of the alphabets shown above will serve as a model in imitating the type.

Old Style and Old Face letters will be drawn after the formal hand, Modern designs will follow the half-uncial; sans-serif letters are most conveniently made with a ball-pointed pen.

A little training will soon enable the student to vary the serifs and shapes so that the majority of existing type letters may be quickly and effectively simulated.

The pen-drawn layout often gives a closer approximation of the finished printed work than one drawn in pencil. It can

A B C D E F G  
 H I J K L M N  
 O P Q R S T &  
 U V W X Y Z  
 a b c d e f g h i j  
 k l m n o p q r s  
 t u v w x y z : ;  
*"Slanted-Pen" characterization of *

FIG 57—FORMAL SLANTED-PEN ALPHABETS  
 (from Johnston, Fig 148)



FIG 58—FORMAL STRAIGHT-PEN ALPHABETS  
 (from Johnston, Fig 147)



be highly finished because all guide lines may be removed by vigorously rubbing with an india-rubber, rough handling in the composing room, too, will not obscure any of the letters. It has an objection that corrections cannot easily be made, although an ink eraser or the pasting over of the part needing alteration will cover this eventuality.

When layouts are made in pencil they can often be made on tracing or other thin paper. In this case large display lines may be traced over, smaller types may be written over through the paper, and other devices used to obtain close approximation to the correct size and width of the type faces to be used.

Every designer should collate a file of type faces from which he may measure off or trace his display lines or count up averages of body types. These sheets are best kept in a loose-leaf file and taken out when they are required for working purposes. A book of fixed pages is far too awkward to work with. These sheets should be obtained from the printer who serves the designer, many of the trade supply houses are also glad to supply sheets of their type faces through the medium of a printer. These sheets are, however, rarely complete, and the avid student (who may not be sufficiently important to command a special setting from the printer) will seize every opportunity of cutting out the characters or letters which he lacks in his collection of type faces.

Strips of border material should also be kept, pasted up by their ends, so that they may be used for pasting on layouts, particularly if the layout is to be submitted to the uninformed layman. When the layout is for the composing room, about an inch only need be pasted up and the rest indicated by an area or a pair of lines.

Layouts of a kind may be made on the backs of old envelopes or anywhere that a sheet of paper can be spread out. Some of the cleverest and most effective layouts have probably been evolved in this way over the lunch table or in other unusual circumstances. But proper facilities for making the layout will, if not inspire, at least expedite the work. In addition, the architect of the printed page is worthy of a

convenient place to plan what is a most important part of the printed piece

#### THE DESIGNER'S TOOLS

Some of the tools in common use by many designers may here be given. The drawing-board should be large enough to take double crown (20 in.  $\times$  30 in.), or even larger if broad-sides are handled frequently. The top and sides should be perfectly square if accurate rectangles are required to be drawn with T-square. It will also be convenient if a hinge is affixed to the top edge so that the board can be tilted when necessary. The lower edge should be rounded (chamfered) so that overlying sheets will not be marked by pressure. The T-square and the set-square are very valuable tools if there is a need for ruling many parallel lines, as may be required when much text matter is to be indicated on layouts or many lines of large type to be drawn on the layout.

A steel type gauge showing inches and 8, 10, and 12-point ems is essential and, if it is bevelled, measurements will usually be more accurate.

Compasses and dividers may occasionally be needed, but a scriber or a bodkin is of great use for pricking through dummies to show the areas of the type pages. An agate may be used if layouts are required in pencil, and it obviates the need for rubbing out constructional lines.

With regard to pencils, the designer usually has his own particular preference, but Woolff's Spanish Graphite 2B pencil is favoured by the author. It is a good standard for all pencil work, as it readily erases with a soft rubber (which should be of good quality and of practical size—the nine-penny size is most convenient). "Black Prince" is a good make for a pencil of heavier calibre.

A number of penholders will be required to hold varying thicknesses of pen-nib widths. If they are used for colour, they should be kept separate. Black penholders may be used for pens to be used with black ink, red penholders for nibs for colour. All pencils, pens, brushes, are most conveniently kept on the desk in a pot or jar, this enables the designer to

select them readily as he needs them. Pots of poster colour and brushes (at least one for fine work and one for washes) may be useful. Desk equipment may be supplemented with coloured crayons of red, blue, and green.

Other items may include a glass with a double concave lens, known as a reducing glass, which enables a drawing to be visualised when reduced; gum arabic (paste is not recommended) which can be kept ready mixed in a glass jar.

#### ESTIMATING THE TYPE FACES

The width of large display faces may be measured from specimens of the actual type faces, a complete reference of which should be kept at hand. In estimating masses of body matter the common methods advocated in most text-books are based on an average number of words to the square inch. This method is not practical, as the kind of copy and the set width of different types necessarily vary. The only dependable way is by counting the characters of the copy and of the proposed type face.

The number of words in the copy when typewritten can be easily computed, as each character on a typewriter occupies the same lateral space. If, for instance, there is an average of sixty characters in each line of the typewritten copy, fifty lines to the page, and twenty pages, then  $60 \times 50 \times 20$  will give the total number of characters in the whole copy.

The short lines at the ends of the paragraphs may be estimated as full lines because there will be a corresponding number of similar lines in the type matter when it is set. If there is a large variation between the number of typewritten lines and the number of characters in the type line, however, allowance should be made. To find out the area that the copy will occupy when it is set in type, count the number of characters of the type face that the selected measure will occupy. Note that spaces between words, commas, and other punctuation marks are counted as one letter each. If the number of characters in the manuscript (in the case mentioned above, 60,000) is divided by the number of characters that the type measure will occupy (for our purpose, assuming

that the measure is 25 ems and the type face is 10-point Goudy Old Style, it will be 60), then the number of lines obtained by division is 1,000. This depth may be converted into pica ems by multiplying by the body size and dividing by 12. If the type is leaded, the amount of the leading (in points) is added to the body size of the type used.

If the size of the type face and the measure are already decided, the copy may be typed so that the manuscript will average line for line with the type lines. The area that the matter will occupy can then be estimated from the type-written copy.

Another method of determining the number of pages that a given manuscript will occupy is to set a few lines of the matter in the selected type face and base the calculations on the actual type setting. If there are 200 pages of copy averaging 30 lines to the page and there are 40 lines to the printed page, and ten lines of type when set are found to occupy six lines of the copy, then the total space that the whole manuscript will occupy may be easily worked out:  $200 \times 30 \times 10$  and divided by 6 gives the number of type lines, and divided by 40 gives the number of pages, i.e. 250.

#### THE PREPARATION OF COPY

If it should fall to the designer to write the copy for a certain commodity or service and he is not experienced in this work, he should make certain that he gives the following details: the name of the product, what it is, what it does, how much it is, and where it can be purchased.

The actual writing of the copy is usually the work of a specialist; nevertheless it is the designer's duty to see that the copy is properly prepared for the printer.

Copy should be neatly typed and checked to see that its punctuation is correct *before* it is set. Good punctuation like good spacing is a great help to the clear comprehension of the copy.

The editing of copy is not within the province of the printer or his reader, and badly prepared copy adds considerably to the cost of composition and may be charged

extra In the best printing offices only typewritten copy is accepted, and rightly so, as the job is estimated for on the assumption that it is "fair "

The copy, whether written by hand or typewritten, should not be crowded nor complicated by undue correction, but should be easily readable and also arranged in its correct sequence Each page should be clearly numbered If typewritten, it will be an advantage to "double space" the lines "Single spacing" is too close for fast composition and leaves insufficient space for alterations and revisions

If the copy is in manuscript, particular care should be taken with unusual words and proper names. Any instruction or remark not to be printed should be encircled or written in red ink.

#### PAPER AND ITS SELECTION

Typography is the appearance of printed matter, and paper is normally the surface on which it appears.

The texture of paper depends, like most commodities, upon the composition of the pulp or other material from which it is made (whether pure linen rag, cotton rag, esparto grass, wood, rope, or bagging).

Linen makes the strongest and finest paper Linen papers are tough, hard, and make crisp and strong banks and bonds With the advent of the typewriter the former smooth and burnished writing papers have given way to thin fine banks which allow many carbon copies to be made but which stand up to the blow of the typewriter key.

Cotton makes a mellow, pliable paper of great durability, it is not so crisp as a linen paper

Wood papers are made from mechanically ground wood and wood digested in chemicals Such papers are easily torn and worn in use, their colour is bad, they have little translucency, and are harsh and brittle

Esparto papers are ideal for book printing and make ideal pulp for paper that is to receive a special coating or other finish The surface of paper depends on the finish given to it, whether sized, loaded, calendered, or patterned.

The weight of paper depends on the thickness of the sheet, the pulp, and the loading.

The foregoing are the chief properties that determine the choice of a paper and its suitability for a given purpose.

The main varieties of paper and their common uses are here discussed with a view to giving the reader the right approach to the study of paper rather than as a complete guide to the manifold varieties of paper available to-day. It is suggested that the student should collect as complete a range as possible from the samples inserted in the trade journals and other sources and arrange them under these main headings, separating them into more detailed subdivisions as the collection grows. When the conduct of a certain paper for an actual job is to be discovered, paper-makers are always willing to submit sample sheets for the purpose.

The main varieties are

Antique. soft paper, pulpy and fluffy, not calendered or sized not suitable for half-tone blocks, fine-line blocks, or small types; bulks well and enables a publisher to produce a book which looks worth more than it really is, absorbs ink quickly and does not therefore "set off" on to adjacent sheets, its lightness saves postage. The better grades are used widely for brochures, booklets, folders, etc., and these are sometimes lightly sized.

News or Newsprint the cheapest kind of printing paper; made from mechanical wood pulp, cheap and non-durable; will print line blocks and the very coarsest half-tones; used for wrapping (cheese, fried fish, etc.), handbills, and newspapers.

Machine-finished (MF) a paper which is sized and calendered on the paper-making machine, used for the common kinds of printing. MF means that it is not specially finished in any way, but is used as it comes off the machine. Size is added to the paper before it is made into sheets; it renders the paper less porous, so that the ink dries on the surface and is not absorbed too much by the paper (Blotting paper is not sized because the maximum absorption is required of it.)

Writing papers are sized after they are made because writing ink is thinner than printing ink and a good sizing prevents the fluid ink from spreading

Machine-glazed a paper which is glazed on one side of the paper only, as it is used mostly for posters which are printed on one side of the paper.

India Paper a very strong, thin, but opaque paper used for bibles, encyclopædias, and books where a large number of pages are required without bulk

Super-calendered (SC) paper of similar quality to MF, but which is steam-sprayed and passed at high speed through a series of calenders (metal rollers), which smooth and polish it and give it a glossy finish. Half-tone blocks up to 100 screen can be printed on it.

Art (or Coated Paper) coated with china clay or other preparation, which fills the pores and gives a perfectly smooth surface so that half-tone blocks may be printed on it; although necessary for half-tones of fine screen, is liable to crack when folded, dries into a solid slab if it gets wet, is heavy and unpleasant to handle, smells badly because of the adhesive used to keep the coating on; has high reflecting qualities which dazzle the eyes. Matt art paper is easier on the eyes and has a velvety surface. Half-tones look much duller on it, and its surface marks easily. Art papers are widely used for high-grade catalogue work and for illustration work. Chromo art is a heavily loaded art paper.

Imitation Art Paper a cheap substitute for the foregoing, clay or filling medium put into the pulp before the paper is made into sheets, called "loaded" paper; does not crack so easily as art paper, a silver coin will not mark it, but will mark real art paper.

Bond or Bank a thin, tough writing and typing paper, slightly roughened surfaces are better for both writing and typewriting

Cover Papers are of many kinds, special finishes such as linen finish, leather finish, are made by pressing the paper between specially made rollers or linen or fabric

Cartridge. a tough paper with a rough finish, used for

drawing and envelopes Offset cartridge is a special kind of cartridge paper made for offset work, but suitable for a wide range of letterpress printing uses, its hard sizing enables it to print fine line blocks and coarse half-tone blocks.

Paper should be examined for good colour, absence of specks and fluffiness, behaviour under folding, "look through" (to test the pulp from which it is made), and sizing

Coated papers should be free of dust, the coating should adhere firmly (a wetted thumb pressed on the surface should not bring away much of the coating), there should be no lumps or streakiness, and the finish should be very high. Imitation art paper should be well calendered, but without any sign of blackened appearance

The smoother the surface of the paper the less will the ink spread or splurge Types with thin lines, therefore, will have their weaknesses accentuated on art and calendered papers; types of bold line will counteract this effect. For this reason Caslon, Garamond, Centaur, look better on an antique paper, Plantin remains a sturdy-looking type on an art paper Antique papers tend to thicken the appearance of a type, art papers to refine it

Paper is usually made in standard quantities (called reams) of 500 sheets. A few remarks on the sizes of paper may here be helpful There are two kinds of names given to paper sizes The first name designates one or other of several arbitrary standard sizes, and implies a certain fixed length and width, such as "demy," which means a sheet of paper  $17\frac{1}{2}$  in. by  $22\frac{1}{2}$  in The other name states the multiple or subdivision of this size as produced by multiplying the standard size or by folding it once, twice, etc "Double demy" means that the short dimension has been doubled, i.e. a sheet measuring  $22\frac{1}{2}$  in. by 35 in "Demy octavo" means that the demy sheet has been divided into eight by folding successively across the longer dimension, i.e.  $5\frac{1}{2}$  in. by  $8\frac{3}{4}$  in

These various multiples and subdivisions may be easily determined by using the following formulae (L = long side, S = short side of the paper)



STANDARD SIZES OF PRINTING PAPERS  
(UNTRIMMED)

Name	Broadside Inches	Folio Inches	Quarto Inches	Octavo Inches	Long Octavo Inches
Double Demy	$22\frac{1}{2} \times 35$	$17\frac{1}{2} \times 22\frac{1}{2}$	$11\frac{1}{4} \times 17\frac{1}{2}$	$8\frac{3}{4} \times 11\frac{1}{2}$	$5\frac{1}{2} \times 17\frac{1}{2}$
Imperial	$22 \times 30$	$15 \times 22$	$11 \times 15$	$7\frac{1}{2} \times 11$	$5\frac{1}{2} \times 15$
Double Crown	$20 \times 30$	$15 \times 20$	$10 \times 15$	$7\frac{1}{2} \times 10$	$5 \times 15$
Super Royal	$20 \times 27$	$13\frac{1}{2} \times 20$	$10 \times 13\frac{1}{2}$	$6\frac{3}{4} \times 10$	$5 \times 13\frac{1}{2}$
Royal	$20 \times 25$	$12\frac{1}{2} \times 20$	$10 \times 12\frac{1}{2}$	$6\frac{1}{4} \times 10$	$5 \times 12\frac{1}{2}$
Medium	$18 \times 23$	$11\frac{1}{2} \times 18$	$9 \times 11\frac{1}{2}$	$5\frac{1}{2} \times 9$	$4\frac{1}{2} \times 11\frac{1}{2}$
Demy	$17\frac{1}{2} \times 22\frac{1}{2}$	$11\frac{1}{4} \times 17\frac{1}{2}$	$8\frac{1}{2} \times 11\frac{1}{2}$	$5\frac{1}{2} \times 8\frac{3}{4}$	$4\frac{1}{2} \times 11\frac{1}{2}$
Large Post	$16\frac{1}{2} \times 21$	$10\frac{1}{2} \times 16\frac{1}{2}$	$8\frac{1}{4} \times 10\frac{1}{2}$	$5\frac{1}{2} \times 8\frac{1}{2}$	$4 \times 10\frac{1}{2}$
Crown	$15 \times 20$	$10 \times 15$	$7\frac{1}{2} \times 10$	$5 \times 7\frac{1}{2}$	$3\frac{3}{4} \times 10$
Large Foolscap	$13\frac{1}{2} \times 17$	$8\frac{1}{2} \times 13\frac{1}{2}$	$6\frac{1}{2} \times 8\frac{1}{2}$	$4\frac{1}{2} \times 6\frac{3}{4}$	$3\frac{1}{4} \times 8\frac{1}{2}$

STANDARD SIZES OF WRITING PAPERS  
(UNTRIMMED)

Name	Broadside Inches	Folio Inches	Quarto Inches	Octavo Inches	Long Octavo Inches
Imperial	$22 \times 30$	$15 \times 22$	$11 \times 15$	$7\frac{1}{2} \times 11$	$5\frac{1}{2} \times 15$
Super Royal	$19 \times 27$	$13\frac{1}{2} \times 19$	$9\frac{1}{2} \times 13\frac{1}{2}$	$6\frac{3}{4} \times 9\frac{1}{2}$	$4\frac{3}{4} \times 13\frac{1}{2}$
Small Royal	$19 \times 24$	$12 \times 19$	$9\frac{1}{2} \times 12$	$6 \times 9\frac{1}{2}$	$4\frac{3}{4} \times 12$
Medium	$18 \times 23$	$11\frac{1}{2} \times 18$	$9 \times 11\frac{1}{2}$	$5\frac{3}{4} \times 9$	$4\frac{1}{2} \times 11\frac{1}{2}$
Small Medium	$17\frac{1}{2} \times 22$	$11 \times 17\frac{1}{2}$	$8\frac{3}{4} \times 11$	$5\frac{1}{2} \times 8\frac{3}{4}$	$4\frac{1}{2} \times 11$
Large Post	$16\frac{1}{2} \times 21$	$10\frac{1}{2} \times 16\frac{1}{2}$	$8\frac{1}{4} \times 10\frac{1}{2}$	$5\frac{1}{2} \times 8\frac{1}{2}$	$4 \times 10\frac{1}{2}$
Small Demy	$15\frac{1}{2} \times 20$	$10 \times 15\frac{1}{2}$	$7\frac{3}{4} \times 10$	$5 \times 7\frac{3}{4}$	$3\frac{3}{4} \times 10$
Small Post	$14\frac{1}{2} \times 18\frac{1}{2}$	$9\frac{1}{4} \times 14\frac{1}{2}$	$7\frac{1}{4} \times 9\frac{1}{4}$	$4\frac{1}{2} \times 7\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$
Foolscap	$13\frac{1}{4} \times 16\frac{1}{2}$	$8\frac{1}{4} \times 13\frac{1}{4}$	$6\frac{1}{2} \times 8\frac{1}{2}$	$4 \times 6\frac{1}{2}$	$3\frac{1}{4} \times 8\frac{1}{2}$

Quad multiply S by 2 and L by 2.

Double multiply S by 2

Folio. divide L by 2

Quarto divide S by 2 and L by 2

Octavo divide S by 2 and L by 4.

Sixteenmo divide S by 4 and L by 4

Long Octavo divide S by 4 and L by 2

Long Quarto divide L by 4.

Twelvemo divide S by 4 and L by 3

Long Twelvemo divide S by 2 and L by 6

Square Twelvemo divide S by 3 and L by 4

It is useful to bear in mind that folio means dividing into two sheets, quarto, four, octavo, eight, sixteenmo, sixteen, twelvemo, twelve. Note that there are two kinds of quarto and octavo and three kinds of twelvemo

In bookwork allowance must be made for trimming the pages after they are folded, other work is also usually trimmed. Forms with bled-off blocks will require the use of a larger size of paper, and this will generally add to the cost. A fold which is not normally done by the folding machine is also liable to be an added charge.

Boards is a term used for various kinds of cards. Pulp board is a fairly thin board which is used for post cards and trade cards. Pasteboard is made of several thicknesses of pulp, and is commonly used for visiting cards. Art board is a board which has been covered with an art paper so that half-tone illustrations may be printed on it.

The following percentage is usually allowed for spoilage.

Quantity	One colour	For each extra colour	Binding
100-250	10	5	5
250-500	6	4	4
500-1,000	5	2½	2½
1,000-5,000	4½	2½	2
5-10,000	3½	2½	2
10-25,000	2½	2½	2
✓ Over	2	2	2

#### PRINTING INK

The constituents of printing ink are a pigment (the colouring matter) and a medium to hold it (or vehicle). Other

compounds are also added to accelerate or delay drying or to leave a gloss

Black ink is a mixture of a natural gas carbon with a vehicle such as varnish and any drier which may be necessary to suit the ink to the particular paper used

Ink dries by absorption into the paper, oxidation of the exposed surface to the air (thus forming a dry skin), and evaporation

With a hard, smooth paper absorption will be slow, with a porous antique absorption will be rapid. The ink is treated to compensate for these conditions

Generally, black ink needs less impression to make it adhere to the paper than a coloured ink, as the gas carbon is of finer particles than the pigments of most coloured inks

Pigments consist of natural earths (such as yellow ochre, green earth, umber, sienna), mineral earths (such as cobalt, chrome, zinc, and white leads), synthetic preparations derived from coal tar, and precipitated aniline dyes.

Vehicles are prepared from linseed oil, which binds the dry colour, imparts brilliancy to the colour, and allows distribution on the rollers

Inks containing mineral compounds such as lead, arsenic, copper, zinc, should be avoided on any printed matter which is likely to come into contact with foodstuffs. Inks for soap wrappers or wrappers to be used for alkaline substances must be able to resist the bleaching effect of the alkali, or the ink may disappear, phosphorus and sulphur will also change the colour of some inks.

Many inks are sensitive to light and weather, and the avoidance of pigments so affected is advisable. Posters and bills exposed outdoors may be preserved to some effect by varnishing, but care should be taken to ensure that the varnish does not affect the colours

## A NOTE ON PRESENT-DAY TENDENCIES

An advertising message is ineffective unless its presentation has a quality of surprise and appeal. The need for new methods in typographic presentation has been responsible for the growth of a new technique. The arguments for purchasing goods remain constant. Public consciousness must therefore be aroused by new ways in order to make these arguments effective. In the search for new typographic formulae it is but natural that designers should be influenced by other movements in modern civilisation, particularly the arts of painting and architecture.

Contemporary art has been classified into four groups by Mr. Herbert Read (*Education through Art*, London, 1943): realism, naturalism, impressionism—terms indicating an imitative attitude towards the external world of nature; superrealism, futurism—terms indicating a reaction from the external world towards immaterial (spiritual) values; expressionism, fauvism—terms indicating a desire to express the artist's personal sensations; constructivism, cubism, functionalism—terms indicating a preoccupation with the inherent (abstract) form of qualities of the artist's materials. It is the last group which has affected design in typography more than any other single factor. This attitude expresses itself in "pure" or non-functional abstract paintings and carvings, where the artist's intention is not directed to any external purpose beyond the expression, in the concrete elements of mass, outline, colour, and tone, of his inward sense of harmonious relationships and proportions.

The new spirit in typography was mainly guided by Walter Gropius and the Bauhaus (which he founded at Weimar and later at Dessau) and it was considerably influenced by constructivist, cubist, functionalist, abstract painting. Its principal note was the use of asymmetric design to give dynamic movement. The axis is not central and

balance is more difficult to secure but the design can be made much more effective and the normal direction-contrasts of the horizontal and vertical in typographic arrangement can be fully exploited.

If we compare the traditional centred style of display, embellished with its customary borrowings from the past, with the modern, constructivist style, it must be admitted that the approach, graphically, is more direct, and that the arrangement is more in keeping with the method of type composition which normally runs horizontally and vertically, and forms rectangular masses rather than curved masses. In printing no decline in craftsmanship has been caused by this new impetus in design; printing is being better designed than ever.

Unfortunately contemporary design has been much mis-represented. Not everything which shows some new departure can be laid at the door of the modernist. The imitator is always alive and kicking to give a handle to the uninformed critic. The livelier of the modern designers are developing styles which are not revivals, rehashes, or olla podridas of the past ages. Some will condemn them as Beethoven, Wagner, Stravinsky, and Cézanne were condemned. The following remarks by a writer on design over forty years ago are still just as pertinent to-day: "The term *L'Art Nouveau* has been woefully misconceived and misused. At its inception it was the gospel of line and proportion in design as opposed to the gospel of 'style.' But, unfortunately, like so many other good things, it has become a fad to be seized upon by the man whose creed is novelty for novelty's sake, or who must needs be up to date. As a result the term has been made to stand sponsor for weird, meaningless line arrangements, at times passably interesting, but too often totally devoid of beauty, and showing the touch of a hand that understandeth not. It is under these circumstances alone that *L'Art Nouveau* can become a term of reproach. The true 'new art' is not new at all; it is merely a return to elementary principles of design, and, as such, must be counted as a wholesome step in the efforts of man since the dawn of history to make useful things beautiful."

The modern mode in design tends therefore to use asymmetric or dynamic forms rather than symmetric or static forms. Symmetric designs give an effect of rest and perfect balance, they are static, the masses and lines of the design are in perfect equilibrium. In an asymmetric design the masses and lines are arranged to give an appearance of balance, the design is dynamic, the disposition of the masses and lines suggests motive force. Fig 19 shows a simple, formal, symmetric, static arrangement, a design which would be suitable for a title-page, bank advertisement (suggesting stability), or—a cenotaph. The design remains serene. In Fig 59 the whole arrangement is asymmetric, dynamic, alive, and in motion. The form is a more useful design in advertising (where attention is an essential) than the static design of the title-page or tombstone.

Dynamic designs do not need absurd slants, unrelated masses, undisciplined type forms, distorted figures, to give them effect, but they can be used to give life to advertising and give it more abundantly.

One of the more notable exponents of the modern tendency, Jan Tschichold, has said "I attempt to cultivate an asymmetrical form of make-up and setting, and believe this form is capable of improving present-day typography considerably. An asymmetrical style gives scope for greater variety and is better suited to the practical and aesthetic requirements of modern mankind."

Poor designers have copied the accents of the newer design without understanding the principles upon which they are based. A glance at the typography of the past ten years will show a number of examples which illustrate how unintelligent novelty may degenerate into futility, and the advertisement defeat its primary purpose of getting read.

The one and only purpose of advertisement is to deliver a message plainly, comfortably, and effectively. No purpose is effected by cluttering up all the space with inexpressive detail. Advertisements of this kind suggest bad salesmanship and false thinking, the message is obscured under a cloud of typography. Typographic tricks are no substitute for original

# Gill Sans

A modern sans-serif designed by Eric Gill  
in a comprehensive range of sizes and designs

Here are some of the many variant designs

light
<i>light italic</i>
medium
<i>medium italic</i>
<b>bold</b>
<b><i>Bold Italic</i></b>
<b>bold condensed</b>
<b>Extra Bold</b>

THE MONOTYPE CORPORATION LTD

presentation. The old-fashioned heading-story-picture-name-block-coupon advertisement is fast disappearing, and the newer forms are slowly but surely creating fresh means of expression.

One of the principal notes is simplicity and directness. We have had a fine harvest of typographic efflorescence in the first half of the twentieth century, a reversion to starker forms of printing will be a useful antidote in the second. This stripping of unessentials which hamper expression suggests a direct approach, good salesmanship, and a plain statement of the facts.

A contemporary critic writes "Somebody has said that the nineteenth century was the age of individualism and that the twentieth is the age of organisation. There is a truth in this—a truth that is sometimes deplored by those who see only the frightful economic mess into which we have been landed by new social principles that we have adopted but cannot control, and by organisation that is not organic. Nevertheless the ideal of a new social organism is active in the world, and this ideal is capable of influencing the arts of man, even at a time when his business affairs are in a hopeless muddle. Millions of minds everywhere are just opening, and dream vaguely of a wider social happiness. Many of these dreams are unselfish and spiritual in quality, however vague they may be, and a society fermenting with such thought is the natural background for an art that searches after vital forms in all man-made things, whether for use or for enjoyment. And modern art not only affects the actual making of things. It strives to introduce a new spirit of order (Fig. 61) in daily life and in the transaction of business—clearing away old rubbish in a growing demand for visible common sense in matters of light and space, tidiness, convenience, simplicity, and freedom from encumbrances which arise from custom (Fig. 60) and not from active needs."



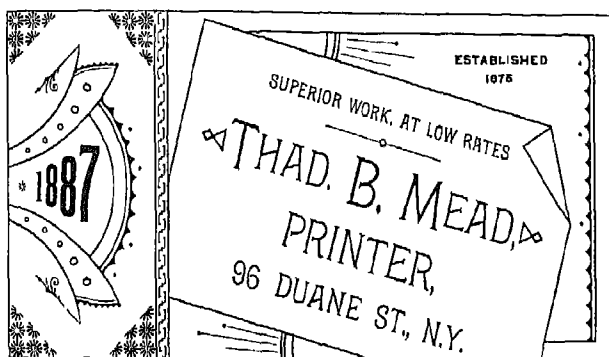


FIG 60—"ENCUMBRANCES WHICH ARISE FROM CUSTOM"

ESTABLISHED 1875

THAD · B · MEAD

*superior work at  
low rates*

printer

96 DUANE STREET  
NEW YORK

1948

FIG 61—"A NEW SPIRIT OF ORDER"

exhibition of  
**modernist art**

---

painting

---

*furniture*

---

sculpture

---

*fabrics*

---

LEEDS GALLERIES  
BRIGGATE

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